



# SS-820B Digital Ultrasonic Cleaner



## USER MANUAL



### Features:

<b>1. More evenly distributed ultrasonic waves inside the tank:</b>	The dimensions are optimal for a 2000 ml (2.1 quart) tank.
<b>2. Industrial grade ultrasonic transducer:</b>	Stronger cleaning, higher durability
<b>3. 2-color LED display:</b>	1 to 30-minute full range timer, suitable for many different cleaning applications
<b>4. Ceramic heater:</b>	Advanced ceramic heater, safe and efficient
<b>5. Overheat protector:</b>	Prevents overheating and effectively prolongs the life span of the machine
<b>6. Dual heater protection:</b>	Heater automatically shuts off after 45 minutes to ensure safety
<b>7. Cooling fan:</b>	Improves heat dissipation and beneficial for continuous operations
<b>8. Moisture-proofed PCB:</b>	Capable for different working environments
<b>9. Degas feature:</b>	Dissolves the solution quickly
<b>10. Industrial IC:</b>	Better anti-interference performance
<b>11. Detachable power cord:</b>	Easier to use
<b>12. Housing made from engineering resin:</b>	Better water-proof and drop-proof properties

# INTRODUCTION

**Use tap water. Chemical solutions are unnecessary in most cases.**

## **Principles of ultrasonic cleaning:**

Millions of tiny air bubbles are generated inside the liquid by high frequency vibration. The air bubbles burst inside the liquid and shake off the debris to achieve the cleaning effect.



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

## **Main Features**

- Tank size: 18.3 x 15.3 x 7.7 cm / 7.2" x 6.0" x 3.0". Longest item that can fit is 20.4 cm / 8.0". Tank volume 2000 ml (2.1 quart).
- Uniformly distributed ultrasonic waves (70 W). Ceramic heater (80 W).
- 2-color LED display. 1 to 30-minute full range timer. Degas feature.
- Industrial grade IC. Multiple circuit protections. Moisture-proofed PCB. Cooling fan. Improved product durability.

## **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 device is **not intended for use by individuals with restricted physical, sensory or mental capacities or those with a lack of experience and / or knowledge, including children, unless they are supervised by an individual who is responsible for their safety or have received training in operating the device.**
- Please store the ultrasonic cleaner where it is not reachable by children.
- **Danger to children! Danger for death through suffocation!** Keep the packaging material away from 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 a 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.
- The device may come with a polarized plug (one blade is wider than the other) for certain countries. As a safety feature, this plug will fit into a polarized outlet only one way. If the plug does not fit fully in an outlet, reverse the plug. If it still does not fit, contact a qualified electrician.

# SAFETY PRECAUTIONS



**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.



**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. Do not fill the tank above the Max line to avoid overspill.
- 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 reinsert it to restart the device.



## Items Not Suitable For Ultrasonic Cleaning

**Soft Jewelry:**

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 increase 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 we supply as a precaution.

**Others:**

Glass, ceramic, camera filters with preexisting cracks.

Ultrasonic cleaning may increase 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.

# APPLICATIONS



## **Jewelry Stores, Jewelry Makers:**

Jewelry stores can use ultrasonic cleaners to expand services. Jewelry such as necklaces, diamond rings, rings, earrings can be cleaned with tap water to recover the shine.

Jewelry makers can use ultrasonic cleaners to remove debris or abrasive powder from work-in-process items in addition to debris. Turning on the heater will raise the water temperature, melt the wax and improve the cleaning.



## **Optical Stores and Labs:**

Optical stores can use ultrasonic cleaners to provide valuable services. Use ultrasonic cleaner and tap water to remove the debris between the rim and the lenses so the eyewear gets professional cleaning and care.



## **Biology / Chemical Laboratories:**

Labs can use ultrasonic cleaners to clean test tubes, glass or metal containers to remove residual chemicals and materials that can affect the accuracy of the lab tests.



## **Dental Clinics:**

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



## **Homes:**

Children and baby items: Debris left in small holes and crevices are difficult to clean by regular means. Bacteria and mold can develop at these locations. Ultrasonic cleaners can remove the debris and be combined with disinfection to achieve true cleaning.

Silverware and silver, copper, or brass decorations: Debris in the grooves and patterns are difficult to remove by regular cleaning methods. Greasy stains can be removed by ultrasonic cleaners with a small amount (around 20 ml or 1 tablespoon) of dish washing liquid. For silver, copper or brass items with oxidation that has darkened the items, add a small amount of the special solution that can remove oxidation. Shininess will reappear after cleaning with ultrasonic cleaners.

Eyewear, watch bands, shavers, razors and other household items: Ultrasonic cleaners can be used to clean the debris between the rim and the lenses on eyewear, between razor blades, and on the metal mesh of shavers to keep the blades sharp.



### **Shooting Clubs**

To reuse brass cartridges: Adding special acid-based solution can make fired brass useable and like new again.

Gun cleaning and care: Cleaning guns after shooting is time consuming. Adding special solution in the water and using ultrasonic cleaners can complete the cleaning better, quicker and easier than traditional methods.



### **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.



### **Watch Service Shops**

Precision parts cleaning: Put small parts in a beaker made of stainless steel or glass filled with lubricant oil, then place the beaker inside the cleaning tank and add water. Ultrasonic waves will penetrate the beaker and act on the parts to make them clean



### **Printing Shops**

Unblocking dried printer heads or ink cartridges:

Large printers and inkjet printers often have dried printer heads or ink cartridges ports. Replacing them with new ones is very costly. Adding acetone or special cleaning solution 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.






### **Automotive Shops**

To clean precision parts: Add 50 ml (3 tablespoons) of dishwashing liquid in the water, turn the heater on to clean precision parts such as valves, injectors, gears and bearings. Ultrasonic cleaners clean debris in tiny holes and crevices effectively, saving time and effort compared to traditional soaking and brushing methods.

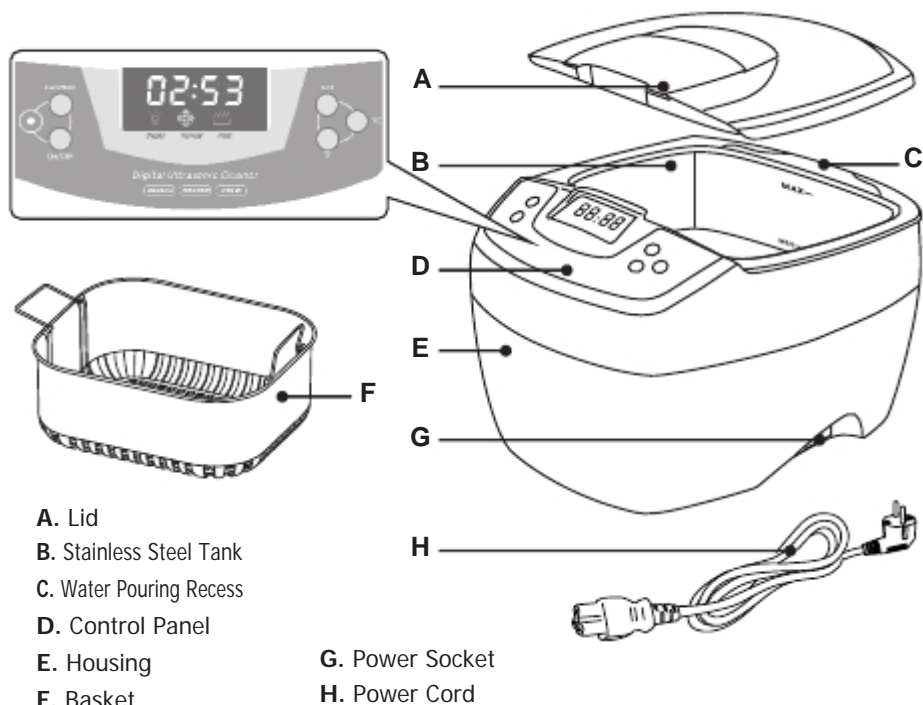
# SAMPLE APPLICATIONS

Jewelry	Personal Items	Dental Instruments
		
Necklaces, rings, earrings, bracelets, etc.	Eyeglasses, sunglasses, shaver heads, watch bands, diver's watches, dentures, etc.	Pliers, handpieces, etc.

Precision Parts	Silverware, Silver, Copper or Brass Decorations	Children and Baby Items
		
Bearings, gears, valves, fuel injectors, etc.	Silverware, silver, copper or brass decorations, etc.	Toys, baby items, etc.

Lab Items	Brass, Gun Parts	PCB, Inkjet Cartridges
		
Test tubes, beakers, flasks, etc.	Reusable brass, gun parts, etc.	PCBs from mobile phones and MP4, ink cartridges, etc.

## PRODUCT STRUCTURE AND ACCESSORIES



## CONTROL PANEL AND OPERATIONS





### 1. Indicator Light - Working Status

Green - Normal working status, ready to use.



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

### 2. On/Off Key - On/Off Switch for the Unit

After powering on, the LED displays  which is the default time and the unit is ready with normal working status.

Press On/Off button once and the cleaning starts. The cleaning stops when the timer count down to **00:00**. If the unit needs to be stopped before the timer runs up, press On/Off button.

### 3. Function Button - Functions (Degas/Normal)

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

#### Degas

When cleaning heavily soiled or greasy items, 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.

#### 4. — Degas Status



 — Illuminated, the degas function is selected.

 — Flashing, degassing is underway.

#### 5. — Normal Cleaning Status

 — Illuminated, normal cleaning is underway.

#### 6. — Heater Status

Press TC button,  flashes, indicating the heater is turned on. Press TC button again,  dims, indicating the heater is turned off.

#### 7. **05:00** Digital LED display of working time. It counts down after work being started.

#### 8. SET Button — Timer quick set button. Press SET button, LED display shows **05:00**.

Pressing it again to set it to **10:00**. Each pressing makes it to increase by 5 minutes.

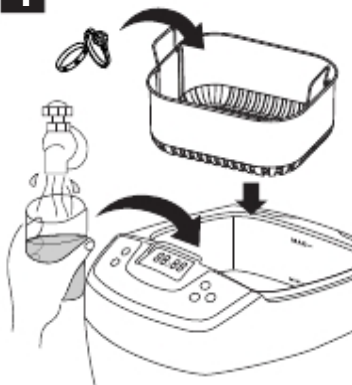
#### 9. ▽ Button — Timer decreasing button. Each pressing reduces the timer by 1 minute.

#### 10. TC Button — Heater button. Pressing TC button, flashes, indicating the heater is turned on. To cancel heating, press TC, dims, indicating the heater is turned off.

When the water temperature reaches 60°C (140°F), the heater will turn off automatically.

# COMMON CLEANING METHODS

## 1 REGULAR CLEANING



Only tap water is needed.

**Suitable Locations:** jewelry stores, optical stores, chemical labs, dental clinics, homes.

### Cleaning Method:

1. Add water to the cleaning tank to the level between "MIN" and "MAX" lines and above the area to be cleaned.
2. Put the items to be cleaned inside the basket or directly in the cleaning tank.
3. Press SET button to set the timer 5 to 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 it absorbs about 30% of ultrasonic energy and reduces the cleaning effect.
2. When the items are relatively large and with greasy debris, they can be put in the tank directly.

During cleaning, debris will come off the items like "smoke". Water will become murky. Cleaning is done when smoke is no longer visible. Replace the water to wash other items.

## 2 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 to be used inside the containers:

1. Watch service shops - Watch oil (to prevent rust)
2. Printing shops - Acetone are 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 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 inside the basket, then put them in the tank. Add water to a level between MIN and MAX, not over the container.
3. Press SET button to set the timer to 10 minutes. Press On/Off button to start cleaning. Ultrasonic waves will penetrate the container and clean the item.

### Selection of container:

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

### 3 ENHANCED CLEANING



Debris accumulated over long time, greasy or heavily soiled.

**Suitable Locations:** jewelry 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 level between MIN and MAX and above the area to be cleaned.
3. Add 20 ml (1 tablespoon) of dishwashing liquid.
4. Press TC to turn on the heater, flashes.  
Press TC 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 SET 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. Change water and wash the items for another 3 minutes to remove the residual debris and the detergent.

### 4 SPECIAL CLEANING



Silver, copper or brass items with oxidation will need special cleaning.

**Suitable Locations:** jewelry stores, home, shooting clubs.

**Cleaning Method:**

1. 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 that can remove silver or copper oxidation according to the ratio recommended (typically 1:10). Use special solutions according to the instructions for bass cartridges.
3. Press TC to turn on the heater, flashes. Press TC to cancel heating when the water temperature will reach 50°C (122°F) after 30 minutes. dims after the set temperature is reached.)

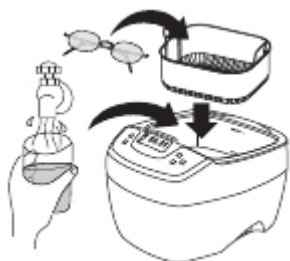
When the water temperature reaches 60°C (140°F), the heater will turn off automatically. To ensure safety, the heater will also be turned off automatically after being turned on for 45 minutes.

4. Press SET button to set the timer to 15 minutes.
5. Press Function button to select Degas function. button illuminates. Press On/Off to start degassing. After 90 seconds, it changes over to normal cleaning.
6. When cleaning is done, remove the basket and the items. If there are large quantities of items and some debris remains, add 5 minutes and repeat the cleaning.
7. Change water and wash the items for 3 minutes 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.

# OPERATION 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 over 30 seconds, it may damage the unit or severely reduce the life of the unit.



- 2** Connect the power cord to an outlet. LED display shows  This is the most common

timer setting and working state. If the timer needs to be adjusted, press SET 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 the 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 the cleaning is underway. Closing the lid will reduce the noise level.

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 it is forced to. The unit will idle for about 20 minutes and can be restarted after the green light comes on.




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

- a. When the heater is needed, press TC button,  flashes, indicating the heater is turned on. When water temperature reaches 60°C (140°F) the heater will be turned off automatically.

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, degas function can be used. Press SET 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, press SET button to 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.

## CARE AND MAINTENANCE



**1 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.



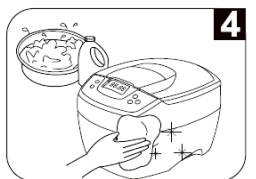
**2 Do not run the unit for extended time or continuously.**

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.



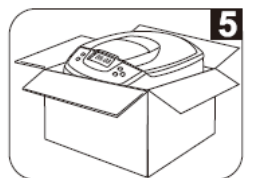
**3 Do not keep water in the cleaning tank for a long time.**

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



**4 Do not spray water over the housing.**


Use a towel to wipe the tank and the housing.



**5 Do not expose the unit under direct sun shine for a long.**

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

## SPECIFICATIONS

<b>Description</b>	Digital Ultrasonic Cleaner
<b>Model No.</b>	SS-820B
<b>Plug Type</b>	
<b>Power Supply</b>	160W (AC 220-240V 50Hz)
<b>Tank Size</b>	18.3 x 15.3 x 7.7 cm / 7.2" x 6.0" x 3.0"
<b>Tank Capacity</b>	2000 ml /2.1 quart (US)
<b>Tank Max. water line</b>	Max.1700 ml / 1.8 quart (US)
<b>Tank Min. water line</b>	Min.550 ml / 0.6 quart (US)
<b>Longest Item Fits inside Tank</b>	20.4 cm / 8.0"
<b>Digital Timer Settings</b>	1 to 30-minute full range timer
<b>Ultrasonic Frequency</b>	35,000 Hz
<b>Tank Material</b>	Stainless Steel SUS304
<b>Housing Material</b>	ABS
<b>Net Weight</b>	2.2 kg / 4.9 lb
<b>Gross Weight</b>	2.9 kg / 6.4 lb
<b>Unit Size</b>	26.5 x 23.0 x 18.0 cm / 10.4" x 9.1" x 7.1"
<b>Inner Carton Size</b>	30.0 x 26.5 x 22.0 cm / 11.8" x 10.4" x 8.7"
<b>Qty per Master Carton</b>	4 pcs.
<b>Master Carton Size</b>	55.0 x 31.0 x 46.0 cm / 21.7" x 12.2" x 18.1"

## SS-820B 數位超音波清洗器

### 使用說明書



#### 特點:

1. 槽內超音波分佈更均勻	2000ml 容積槽最佳的長 X 寬尺寸
2. 工業用超音波發生器	清洗能力強，壽命長
3. 雙色LED顯示器	1~30 分鐘自由定時，適應多種清洗要求
4. 陶瓷加熱器	加熱均勻、耐用
5. 設有過熱保護電路	防止超載運行，有效延長機器壽命
6. 加熱器雙重保護電路	為確保安全，加熱器連續工作 45 分鐘後斷電
7. 熱風扇	改善散熱條件，有利於元器件連續工作
8. 經防潮處理的PCB板	適合更多的工作場所
9. 消氣功能	可加速清洗液與水的溶合
10. 工業級IC	有更強的抗干擾能力
11. 可分離電源線	使用更方便
12. 工程塑膠外殼	有良好的防水及抗摔性能

# 簡介

通常不需要特殊的清洗液，僅需普通的自來水

超音波清洗原理：

超音波清洗是以液體為介質，在高頻振動下產生無數的小氣泡，而這些小氣泡爆破時所產生的能量使污垢脫落而達到清洗效果。



- 在超音波清洗中，使用純淨水或蒸餾水與普通自來水的清洗效果相同，因此使用普通自來水即可。
- 當銀器及銅器的表面被氧化而發暗時，需在水中加入少量的有去氧化層作用的專用清洗液，方可達到既清洗掉污垢又除去氧化層。

## 主要特色

- 清洗槽尺寸：18.3x15.3x7.7cm，可清洗的最大物品長度20.4cm，容量2000 ml
- 超音波分佈均勻(約70 W)，陶瓷加熱器（約80W）
- 雙色LED顯示器，1~30min自由定時，有消氣功能
- 採用工業級IC，有多重電路保護、防潮和散熱設計，使機器壽命更長

## 閱讀指南

請在使用此產品之前，詳細閱讀使用說明書，並仔細閱讀本說明書中的警告語。操作時請遵照本產品說明進行操作。

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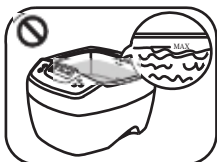


## 安全說明

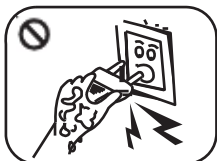
### 注意防止發生火災及人員傷亡



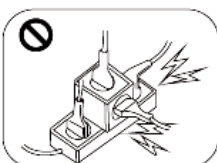
除專業人員，請勿自行拆裝產品。



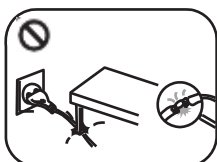
往清洗槽加水之前，請不要插上電源，水量不要超過“MAX-”線，避免水溢出。



禁止用濕手插、拔插頭，以防觸電。



請按使用手冊正確使用產品，切勿擅自使用配件。



請不要使用電源線或插頭已損壞的產品。  
若不能正常工作的產品，請拿到指定維修點進行檢修。

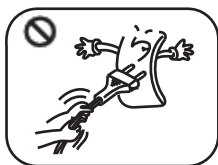


禁止產品在沒有注入水的情況下啓動，“乾燒”會導致產品損壞。

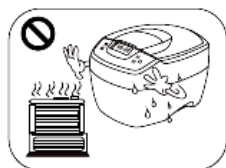
當加熱器開啓時，請勿用手觸摸清洗槽底部，以免燙傷。

## ⚠ 安全說明

⚠ 請提高警惕以防止發生觸電意外



禁止在睡覺或打瞌睡時使用產品。



產品應遠離熱源，並放置於乾燥、平坦的臺面。



若在使用過程中，產品掉入水中，請不要觸摸產品，應立即切斷電源。



禁止用水直接沖洗產品。

## ⚠ 不宜清洗物品

### 珠寶類

玳瑁、珍珠、綠寶石  
象牙、珊瑚、瑪瑙等

由於一些玳瑁、珊瑚等硬度不高，在清洗時有可能會出現因相互摩擦導致刮痕。

### 金屬類

焊接金屬、電鍍金屬  
金屬粘合剂等

用超音波清洗，可能會使焊接點、電鍍層及粘結物品原有的縫隙加大，而出現剝落現象。

### 手錶類

手錶、懷錶等（50米以  
上的防水錶除外）

超音波的滲透性強，偶爾會使防水性不強的手錶有水滲入。（可使用手錶清洗支架來清洗）

### 其他

木製品、玻璃、隱形眼鏡  
陶瓷製品、相機濾色鏡等

鍍膜的玻璃鏡片、陶瓷、木製品、玻璃製品在清洗中，原有的細微裂紋偶爾會因清洗而使裂紋擴大。（完好的則不會出現）

## 廣泛應用



### (1). 珠寶店 / 珠寶首飾製造行:

珠寶店——用於增加服務專案。對於正在使用的首飾（如項鍊、鑽戒、耳環等）只需使用普通自來水，經超音波清洗後，重新恢復閃亮如新。

珠寶首飾製造行——超音波清洗可以去掉珠寶首飾在打磨製作過程中殘留的污垢。

採用蠟型澆注成的金、銀首飾，縫隙內常有少量的蠟層，需打開加熱器，提高水溫，使蠟層快速溶化，增強清洗效果。



### (2). 眼鏡店：

用於客戶的增值服務。只需普通自來水，在超音波的作用下，可去除附著在眼鏡框與鏡片的接合縫隙的污垢，讓眼鏡得到更專業的清潔與護理。



### (3). 生物 / 化學實驗室:

用於實驗室內的各種玻璃/金屬器皿的精細清洗，避免固態及化學品殘留影響試驗準確度。



### (4). 牙科診所:

用於牙科器具在消毒前的清洗，避免器具縫隙殘留的血跡及細小的固體殘存而導致消毒達不到效果。



### (5). 家庭:

兒童 / 嬰兒用品 ——因用品的小孔及縫隙內的污垢難以擦洗乾淨，易滋生細菌或黴變，用超音波清除附著在小孔及縫隙內的污垢後，再消毒處理，才是真正清潔。

高檔餐具及銀 / 銅飾品 ——普通的清潔方法難以洗淨藏在的不銹鋼及銀器雕花紋中的油垢。只需在水中加入約20 ml 清洗餐具用的清洗液即可快捷地去除油垢。

對於表面已被氧化發暗的銀 / 銅器具，可以加入少量有去氧化層作用的專用清洗液，用超音波清洗後，同樣可恢復閃亮。

首飾 / 水晶製品 ——經超音波清洗後，閃亮如新。

眼鏡 / 錶鏈 / 刮鬍刀等日用品 ——清洗藏匿在鏡架縫隙 / 錶鏈間隙 / 刀片及網格間的污垢，方便快捷。



(6). 射擊俱樂部:

彈殼重複使用 —— 在水中加入少量的草酸類的專用清洗液，清洗後的彈殼恢復如新，可再次使用。

槍械零件清洗保養 —— 槍械的擦拭保養是費時的工作，在水中只需加少量的清洗液，即可快速完成清洗，省時省力。



(7). 手機 / 電子產品維修店:

PCB板恢復功能 —— 電子產品因被水浸泡或操控鍵失靈需要維修時，可用無水酒精作清洗液，將PCB板直接放入清洗，可洗去滲入的污垢，從而恢復使用功能。



(8). 鐘錶維修店:

精密零件的清洗 —— 因鐘錶的零件較小，可用不銹鋼 / 玻璃器皿盛裝，將被清洗的零件浸泡在維修用的機油內，將整個器皿放入槽內，清洗槽加水，超音波會穿過器皿作用在被清洗的物品上，使其小孔及縫隙間的污垢被清理。



(9). 噴繪 / 列印店:

疏通堵塞的噴嘴 —— 噴繪機及噴墨的印表機，常因停機後噴嘴堵塞而無法使用，只能更換噴嘴或墨水匣，成本很高。在水中加少量的丙酮類溶劑，通常只需1~2分鐘即可使噴嘴 / 墨水匣堵塞的小孔通暢，恢復使用。



(10). 摩托車 / 汽車修理店:

清洗精密零件 / 軸承 —— 摩托車 / 汽車維修時，用超音波清洗精密的零件（氣閥 / 溢流閥 / 噴油嘴 / 精密齒輪 / 軸承等），只需往水中加50 ml 清洗餐具用的清洗液，並開啓加熱器，便可將零件上的小孔及縫隙中的油垢迅速清洗乾淨，與傳統的刷擦相比，省時省力。

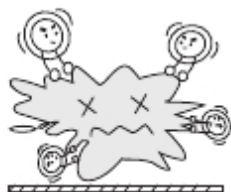
## 應用舉例

珠寶首飾類	日用品類	牙科器械
		
項鍊、戒指 耳環、手鐲等	眼鏡、太陽眼鏡、刮鬍刀頭 手錶鏈、防水手錶、假牙等	拔牙鉗 手機鑽等

精密金屬零件	高檔餐具/銀、銅飾品	兒童/嬰兒用品
		
軸承、齒輪 閥門、噴油嘴等	金屬餐具及銀、銅飾品等	幼兒玩具 嬰兒用品等

實驗室用品	彈殼/槍械零件	PCB板/墨水匣噴嘴
		
試管、量杯 燒杯等	需重複使用的彈殼 槍械零件等	手機、MP4等的PCB板 噴繪機的墨水匣、噴嘴等

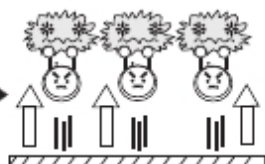
## 超音波除垢過程



水在超音波的作用下，會產生許多微小汽泡

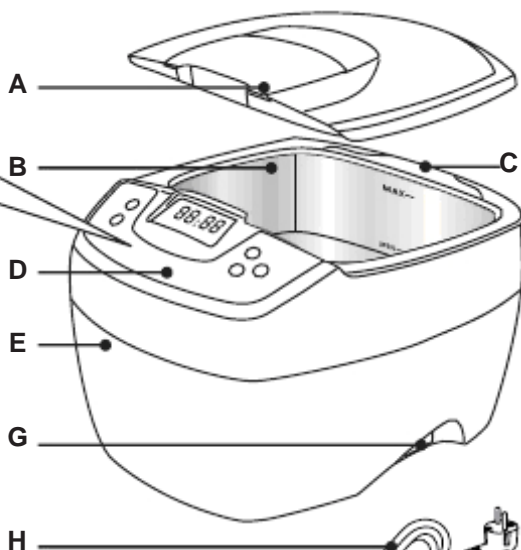


在超音波的作用下汽泡不斷地“爆炸”衝擊物體表面的污垢



污垢分裂成小顆粒狀並脫離物品

## 產品結構及附件



- |        |           |          |
|--------|-----------|----------|
| A. 上蓋  | B. 不銹鋼清洗槽 |          |
| C. 出水口 | D. 操作控制面板 | E. 外殼    |
| F. 清洗筐 | G. 電源線插孔  | H. 電源插頭線 |

# 控制面板上的功能鍵及操作指引



- |              |           |
|--------------|-----------|
| 1.指示燈        | 6. 加熱器顯示  |
| 2.On/Off 鍵   | 7. LED顯示幕 |
| 3.Function 鍵 | 8. Set 鍵  |
| 4.消氣功能顯示     | 9. ▽ 鍵    |
| 5.正常功能顯示     | 10.TC 鍵   |

## 1. 指示燈——工作狀態指示燈：

綠燈亮時——本機工作狀態正常，可以使用。

紅燈亮時——本機處於過熱保護狀態，需停機15分鐘以上，待紅燈變成綠燈後，方可繼續工作。

## 2. On/Off 鍵——清洗機開關鍵：

接通電源後，LED顯示幕自動顯示 **05:00**，這是常用的清洗時間及工作狀態。

按 On/Off 鍵後，超音波開始清洗，當顯示幕顯示為 **00:00**時，機器自動停機。

若需中途停機，按On/Off 鍵即可。

## 3. Function 鍵——功能轉換鍵 [消氣 / 正常]

按 Function鍵， 顯示，可選擇 [消氣]功能。按 On/Off 鍵，進入[消氣]狀態。顯示幕上不斷閃爍，1分30秒後，自動回到[正常]清洗狀態。

需增加消氣時間，再按Function鍵即可。（在[消氣]中需停止消氣，按Function鍵即可）

消氣功能的用途：

當清洗油污嚴重的物品或銀、銅製品時，需在自來水中加化學清洗液，由於清洗液常溫狀態下溶水的速度較慢，會產生多個團狀液滴，新加入的自來水也會有許多小氣泡附著在槽壁，這些因素會在超音波開始階段影響清洗效果。打開消氣功能，通常只需1分30秒即可沖散液滴、擊破氣泡，提高清洗效率。

## 4. ——消氣狀態顯示

——燈亮，本機已選擇消氣功能

——燈閃爍，本機正在進行消氣

## 5. ——正常清洗顯示

——燈亮，本機已選擇正常清洗功能

## 6. ——加熱器工作狀態顯示

按 TC鍵， 閃爍，本機加熱器已啟動。再按 TC鍵， 熄滅，表示加熱器關閉。

## 7. 05:00——LED 顯示工作時間

在清洗過程中，倒計時顯示剩餘工作時間。

## 8. Set 鍵——定時設置快捷鍵

按 Set 鍵，顯示幕顯示**05:00**，再按Set 鍵，跳到**10:00**，每按一次上調5分鐘。

## 9. ▽ 鍵 —— 定時設置下調鍵 每按 ▽ 鍵，LED顯示幕上的時間下調1分鐘。

## 10. TC 鍵 —— 加熱器開關鍵 按TC鍵，顯示屏幕上 閃爍，加熱器啟動。

在加熱過程中，若需取消加熱，只需再按 TC 鍵， 燈熄，加熱器關閉。

當水溫達到60℃時，溫度感測器會讓加熱器自動關閉。

# 常用清洗方法

## 普通清洗



只需使用普通自來水清洗。

適用場所：珠寶店，眼鏡店，生物 / 化學實驗室，牙醫診所，家庭。

操作方法：

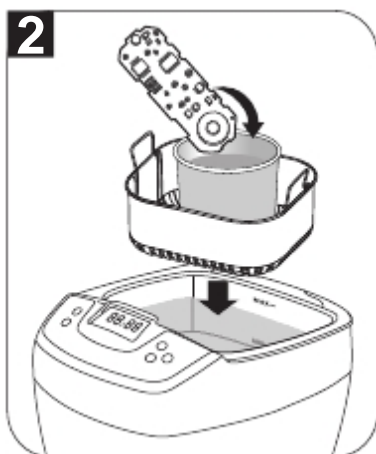
1. 將需清洗的物品放入清洗筐內或直接放入清洗槽。
2. 往清洗槽內加水，並使水位線在MIN與MAX之間且漫過需清洗的部位。
3. 按 Set 鍵設定5~10分鐘的清洗時間，再按 On/Off 鍵開機清洗即可。

清洗筐使用注意事項：

1. 清洗筐可減少清洗物品與清洗槽之間的摩擦，但會吸收30%的超音波能量，使清洗能力明顯減弱。
2. 當清洗較大且油垢較多的物品時，可直接放在清洗槽內清洗。

在清洗過程中，您會看到污垢像“煙”一樣從物品的夾縫中飄出，同時水逐漸渾濁。當您看不到“煙”飄出時，表明物品已基本清洗完成。更換乾淨的自來水，可繼續清洗其他物品。

## 穿透式清洗



將需清洗的物品浸泡在容器中，再將整個容器放入清洗槽中作穿透式清洗。

適用於：鐘錶維修店、噴繪 / 列印店

手機 / 電子產品維修店、家庭

不同行業使用的浸泡液體不同：

1. 鐘錶維修——常用航空機油(防止零件生鏽)
2. 噴繪 / 列印店——常用丙酮類溶劑(溶解油墨)
3. 手機 / 電子產品維修——常用無水酒精(易揮發)
4. 家庭——醫用酒精(除味、清洗、殺菌一起完成)

勿使丙酮類溶劑直接接觸ABS外殼，避免腐蝕。

操作方法：

1. 將需清洗物浸泡在容器的液體中，液面高於物品需清洗的部位。
2. 將整個容器放入清洗筐一同放入槽內，往槽內加水，並使水位在MIN與 MAX之間。
3. 按Set鍵，調整時間為10分鐘，按On/Off 鍵開機。超音波會穿透容器，將物品洗淨。

容器的選擇：1. 塑膠容器——因表面材質較軟，會吸收約30%的超音波，使清洗能力減弱。  
2. 鋁制容器——會吸收約20%的超音波。3. 不銹鋼容器——會吸收約8%的超音波。



## 加強清洗



清洗物品的油垢較多且沉積的時間較長時採用加強清洗。


**適用場所:** 珠寶首飾製造行，家庭  
摩托車 / 汽車修理店

操作方法：1.對於尺寸較大的零件，可直接放入清洗槽中，尺寸較小的物品，先將物品放入清洗筐再一同放入清洗槽。

請勿將物品重疊，避免在清洗過程中相互摩擦。

2.往槽內加入自來水，保持水位在MIN與MAX之間且漫過需清洗的部位。

3.往水中加入少量的清洗餐具用的清洗液約20 ml。

4.按 TC 鍵打開加熱器，此時  閃爍，約20~30分鐘後，水溫超過40℃即可。

溫水及清洗液能軟化油脂，提高清洗效率。

5.按 Set 鍵，選擇10分鐘定時，按 On/Off鍵，超音波開始清洗，油垢像“黑霧”一樣在水裏擴散。

6.清洗完成後，重新換水，將物品再次清洗3分鐘，以便除去殘垢及清洗液殘留。

## 特殊清洗




銀、銅製品表面已氧化發暗，彈殼重複使用，需特殊清洗

**適用場所:** 珠寶店，家庭，射擊俱樂部

操作方法：

1.將物品放入清洗筐內並一同放入清洗槽，加入自來水，水位在MIN與MAX之間且漫過需清洗的部位。


2.按約1:10的比例加入有去銀、銅氧化層作用的專用清洗液。洗彈殼時按要求比例加入草酸類的專用清洗液（詳見專用清洗液說明書）。

3.按 TC 鍵，打開加熱器， 閃爍，約30分鐘，水溫超過50℃即可。

當水溫達到60℃時，加熱器會自動關閉。

為確保安全，加熱器連續工作45分鐘後會自動關閉。

4.按 Set 鍵，設定時間為15分鐘。

5.按 Function 鍵，選擇消氣功能， 亮起後，按 On/Off 鍵開機，[消氣] 工作1.5分鐘後，自動轉為[正常]清洗。

6.清洗完成後，取出清洗筐及物品。

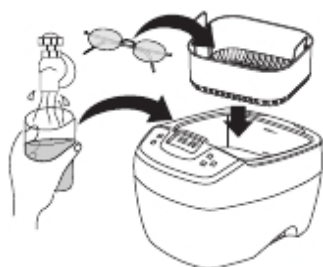
若清洗的物品較多，有部分物品仍有污垢，可再設定時間約5分鐘，重複清洗即可。

7.重新換水，將物品再次清洗3分鐘，以便除去化學品殘留。

在清洗過程中會看到物品上不斷冒出絲絲“清煙”，原本清潔的水逐漸變得渾濁。

此方法不僅可除去銀、銅表面的氧化層還可以洗去花紋、縫隙內的污垢，使製品閃亮如新。

# 操作指南



- 1 打開蓋子，將需清洗的物品放在清洗筐中，並一同放入清洗槽內，加入自來水，保持水位在 MIN 與 MAX 之間，但要浸沒物品需要清洗的部位。



未加水時，啟動機器，因超音波無法向外釋放，超過30秒，可能損壞機器或嚴重影響機器壽命。

2

如圖所示，接通電源。

LED 顯示幕上自動顯示 ，這是最常用的定時及工作狀態。

需調整定時，可按 Set 鍵及 ▽ 鍵，自由設定1~30分鐘的清洗時間。

常用的清洗時間為：5分鐘 / 10分鐘 / 15分鐘。



過長的清洗時間有可能導致：1. 螺釘松脫

2. 原有的裂紋擴大

3. 已損傷的鍍層片狀脫落

3

按 On/Off 鍵，開始清洗。

清洗時，會聽見清洗槽內發出“滋滋”的聲音，表明正在清洗，蓋上蓋子，聲音會明顯降低。



LED顯示幕上倒計時顯示剩餘工作時間，當顯示 **00:00** 時，清洗完畢。

在清洗過程中需暫停清洗，按 On/Off 鍵即可。


本機設有過熱保護電路，避免長時間連續清洗。

紅色指示燈亮時，強行開機，超音波也不會工作。

需停機約20分鐘，待綠色指示燈亮後，方可繼續清洗。


4

參照 "常用清洗方法"，選擇合適的清洗方法。

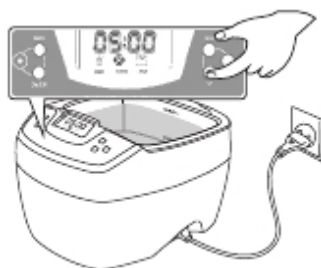
1. 當需使用加熱器時，按TC 鍵， 閃爍，表明加熱器正在工作。水溫達到60℃時，加熱器自動斷電。

為保證安全，本機設計了雙重保護電路。當加熱器連續工作45分鐘後，也會自動斷電。

2. 當在水中加入了化學清洗液時，為加速溶合，可使用消氣功能。

先按 Set 鍵設定工作時間，按 Function鍵， 亮起，按On/Off鍵開機。這樣消氣功能在作用1.5分鐘後自動轉為【正常】清洗。

3. 當看不到污垢像“煙霧”一樣從物品上溢出時，說明清洗可以結束。若需要再次清洗，可按 Set 鍵，重新設定時間，重複上述過程即可。





**5** 清洗完畢後，拔下插頭，打開蓋子，取出清洗物品，從機器上出水口處倒掉髒水，並擦乾清洗槽。（如圖所示）

當機器受到電磁干擾時，可能會出現停機或操控失靈，需拔下電源插頭並重新插入後，方可恢復操控。

## 保養與維護



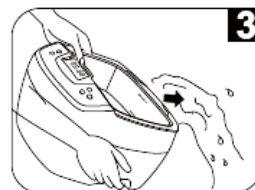
### 請勿不加水開機

雖然機器設有多種保護電路，但如果不加水開機，超過30秒，有可能會損壞機器或嚴重降低機器壽命。



### 請勿長時間連續清洗

機器內設有過熱保護電路，連續清洗45分鐘後，建議停機約20分鐘，以延長機器的使用壽命。



### 請勿將水長時間存放在清洗槽內

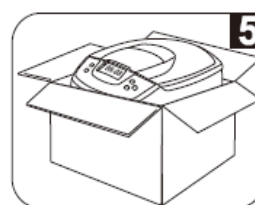
使用後，拔掉電源，按出水口方向倒水。

避免操作不當，水從排風口進入機內，導致機器故障。



### 請勿用水直接沖洗外殼

用幹毛巾把清洗槽內和機器外殼擦幹。



### 請勿曝曬

請將機器放置於陰涼、乾燥、通風處。

## 產品規格

產品名稱	數位超音波清洗機
產品型號	SS-820B
插頭形狀	
電壓及功率	160W (AC 220-240V 50Hz)
清洗槽尺寸	18.3x15.3x7.7cm (7.2"x 6.0"x3.0")
清洗槽容積	2000ml/2.1 quart (US)
清洗槽滿水位	Max.1700ml/1.8quart(US)
清洗槽低水位	Min.550ml/0.6quart(US)
清洗物品的最大長度	20.4 cm / 8.0"
數碼定時	1~30分鐘自由定時
超音波頻率	35,000 Hz
清洗槽材質	不銹鋼 SUS304
外殼材質	ABS
產品淨重	2.2 kg / 4.9 lb
產品毛重	2.9 kg / 6.4 lb
產品尺寸	26.5 x 23.0 x 18.0 cm / 10.4" x 9.1" x 7.1"
內盒尺寸	30.0 x 26.5 x 22.0 cm / 11.8" x 10.4" x 8.7"
裝箱數量	4 pcs.
外箱尺寸	55.0 x 31.0 x 46.0 cm / 21.7" x 12.2" x 18.1"

**Pro'sKit®**

寶工實業股份有限公司

PROKIT'S INDUSTRIES CO., LTD.

<http://www.prokits.com.tw>

E-mail : [pk@mail.prokits.com.tw](mailto:pk@mail.prokits.com.tw)

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