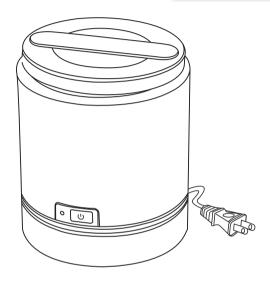
SPECIFICATIONS				
Description	Portable Ultrasonic Cleaner			
Model	D-1800			
	220 ml 0.23 quart (US)	Max.187ml / 0.19 quart (US)		
Tank Capacity		Min.142 ml / 0.15 quart (US)		
Tank Size	Ф78x48mm / 3″x1.9″			
	26W (AC 100 V, 50/60 Hz)			
Power Supply	30W (AC 100~120 V, 50/60 Hz)			
	30W (AC 220~240 V, 50/60 Hz)			
Digital Timer Settings	5-minute auto shut off			
Ultrasonic Frequency	42KHz			
Tank Material	Stainless Steel SUS304			
Housing Material	ABS			
Net weight	0.60 kg / 1.32 lb			
Gross weight	0.76 kg / 1.67 lb			
Unit Size	10.9x10.6x12.8 cm / 4.3" x 4.1" x 5.0"			
Inner Carton Size	14.3x14.3x15.0cm / 5.62" x 5.62" x 5.9"			
Qty per Master Carton	18 pcs			
Master Carton Size	45.5x45x32.5 cm / 17.9" x 17.7" x 12.8"			

Portable Ultrasonic Cleaner

D-1800

USER MANUAL



FEATURES

1 Stainless steel tank

Tank capacity: 220 ml /0.23 qt, Tank size: Φ78x48mm / 3"x1.9"

2 Capacitive sensing switch

Durable, reliable, resistant to water and harsh chemicals

β Φ50x2.6 mm transducer

Compact size, strong power

4 Overheat protector

Prevent overheating, extend the life of the unit

5 One button with 5-minute auto shutoff

Easy to operate

6 Ultrasonic frequency 42,000Hz

Quiet, effcient

8

CARE AND MAINTENANCE



Do not run the unit dry.

If the unit is run without water for over 30 seconds, it may be damaged or the unit's life may be severely affected.



Do not run the unit for extended time or continuously.

Do not run the unit continuously for over 15 minutes. Stop for about 10 minutes in between to prolong the life of the unit.



Do leave water in the tank over extended time.

Unplug the power cord. Pour water out from two sides.



Do not spray water over the housing.

Use a paper towel or cloth to wipe the tank and the housing.



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

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

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 bust 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

This model has the smallest size among all the models. It has a portable design with its cleaning tank (220ml) larger than CD-3900 (140ml). It uses 50x2.6mm ultrasonic transducer to achieve 36-30W power. Concentrated ultrasound energy, suitable for small-sized but difficult to clean items such as dentures, retainers and iewelry.

- Tank capacity: 220 ml/0.23 Qt, tank size: Φ78x48 mm / 3"x1.9"
- Capacitive sensing switch. Better chemical resistance and water proof
- Φ50x2.6 mm transducer, compact size, high power
- This machine is equipped with overheat protector to prevent overheating and to extend the life of the unit.
- One button with 5-minute auto shutoff, Easy to operate
- Ultrasonic frequency 42,000Hz, Quiet, effcient

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.

TABLE OF CONTENTS

Safety Precautions	1/2
Items Not Suitable for Ultrasonic Cleaning	2
Principles Of Ultrasonic Cleaning	3
Sample Applications	3
Internal overheat protector	3
Product Structure and Accessories	4
Cleaning Methods	5
Operation Guidelines	6
Care and Maintenance	7
Specifications	8

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 from 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 not reachable by children.
- Danger to children! Danger for death through suffocation! Keep the packaging material away from children.
- This appliance shall 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 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.



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.

OPERATION GUIDELINES



Remove the lid. For jewelry, attach the jewelry hanger to the lid. Hang jewelry on the hanger. The strainer can be used for jewelry, denture or retainer. It can be placed in the tank directly or attached to the lid.

The strainer can reduce frictions between jewelry and the cleaning tank but it absorbs about 30% ultrasonic energy, and hence reduce the cleaning effect.



Add water in the tank to a level between "MIN-" and "MAX-" lines.

A Running the unit without water in the tank will damage the unit.



Plug in the power plug into an outlet. Touch (b) key, the blue light illuminates, indicating cleaning is underway.

Note: You'll hear buzzing sound which is normal.

The unit has 5-minute auto shutoff. It will stop running once 3 minutes are over.



To clean it again, touch key. To stop it during cleaning, touch key, cleaning stops. The indicator light dims.



When cleaning ends, the indicator light dims. Unplug the power cord to cut off the power. Rotate the lid counter clock wise to open it. Lift the jewelry hanger and the items along with the lid. Empty the water from the tank. Wipe clean of the tank and the housing to be ready for the next use.

After use, it is recommended to use a paper towel or cloth to dry the residual water in the tank.

1

兩種清洗方法



Regular Cleaning

For jewelry which have been cleaned regularly, only tap water is needed. Add water to a level between "MIN—" and "MAX—" lines. Submerge items in the water. Start the unit.



Enhanced Cleaning

1. Dentures, Retainers

To remove tabaco, tea or coffee stains from dentures, add half piece of denture cleaning tablet (denture cleaning powder has better effect), run it for $5\sim10$ minutes.



2. Jewelry

For jewelry that have not been cleaned for a long time, oily debris would exist in crevices. Add a few drops (about 1 ml) of ph neutral detergent will improve cleaning efficiency. Rinse the jewelry with clean water.

3. Tarnished gold alloys and copper

Add water in the tank, add citric acid (about 1.5 g). Running it for 5 minutes will remove debris and oxidation, and brighten the items as new. Run the items in clean water for 5 minutes to remove the residual chemicals.

4. Tarnished silver items

For items that are not tarnished heavily, use sliver cleaning cloth to rub off the tarnish. Then run the items in clean water for 5 minutes.

For items that are tarnished heavily, soak the items in tarnish remover (according to its instructions). Run the items in clean water for 5 minutes to remove the residual chemicals.

Alternatively, use 30% of the ratio of the tarnish remover as in

Alternatively, use 30% of the ratio of the tarnish remover as in its instructions, run the items in it for 10 minutes. Run the items in clean water for 5 minutes to remove the residual chemicals.

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. 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.

IMPORTANT SAFETY INSTRUCTIONS



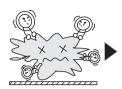
When using electric appliances, basic precautions should always be followed, including the following:

- 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 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 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 preexisting 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. A high frequency is specifically applied in cleaning contact lens.			

5

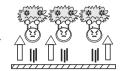
DIRT ELIMINATION PROCESSES



Many tiny bubbles are created when ultrasonic sound is passed through liquid.



Bubble are imploded constantly under the ultrasonic.



The dirt splits into tiny particles thus separating from the item.

SAMPLE APPLICATIONS

Jewelry	Dental Instruments	
Necklaces, rings, earrings, bracelets, etc.	Dentures, Aligners	

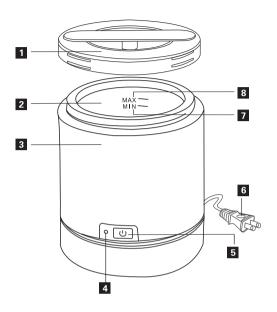
INTERNAL OVERHEAT PROTECTOR

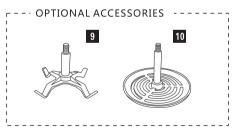


This machine is equipped with overheat protector. When water is not changed and it has been running continuously, the temperature of the electronic components on the PCB rise up gradually. If the internal temperature $\gg =65^{\circ}$ C, the overheat protector is triggered. The blue indicator light changes to red and the ultrasound stop working. The red light dims after 10 minutes and the machine can be used again.

The overheat protector is to prevent shortening of machine's life due to incorrect operations. Avoid trigger the overheat protector during normal operations.

PRODUCT STRUCTURE AND ACCESSORIES





1 TRANSPARENT LID 2 STAINLESS STEEL TANK

3 HOUSING

4 INDICATOR LIGHT 5 TOUCH-SENSING POWER SWITCH 6 POWER PLUG

7 "MIN" MARK

8 "MAX" MARK

9 JEWELRY HANGER

10 LIFTABLE STRAINER