Digital Ultrasonic Cleaner

CDS-100

USER MANUAL

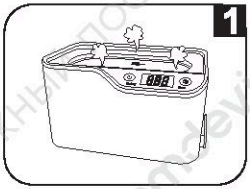


FEATURES

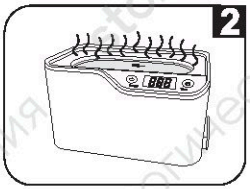
1 Stainless steel tank	Tank capacity: 600 ml / 0.64 qt; Tank size: 16.1x 8.5x 5.0 cm / 6.34" x 8.5" x 5.0". Longest item that can fit is 16.1 cm / 6.34"
2 Control panel with capacitive sensing technology	Durable, reliable, resistant to water and harsh chemicals
3 Digital timer with 5 settings	Suitable for various applications
4 Cooling fan	Good heat dissipation, capable for continuous operations
5 Ultrasonic frequency 42,000Hz	Quiet, Effcient
6 Moisture-proofed PCB with industrial IC	Capable for different working environments with better anti-interference performance
7 Detachable power cord	Convenient to use

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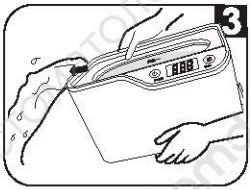
CARE AND MAINTENANCE



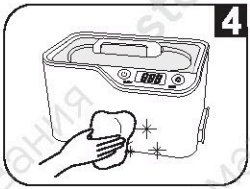
Do not turn on the unit without water in the tank.
If it is turned on for over 30 seconds without water in the tank, it may damage the unit or severely reduce the life of the unit.



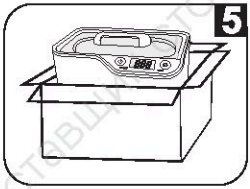
Do not run the unit for extended time or continuously.
Do not run the unit continuously for over 30 minutes. Stop for about 10 minutes in between to prolong the life of the unit.



Do not keep water in the cleaning tank for a long time.
After cleaning is completed, unplug the power cord then pour the 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.



Do not expose the unit under direct sun shine for long.
Keep the unit in a dry, cool and ventilated area.

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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

- Tank capacity: 600 ml / 0.64 qt; Size: 16.1x8.5x5.0 cm/6.34"x3.35"x1.97", Longest item that can fit inside the tank is 16.1 cm / 6.34"
- Control panel with capacitive sensing technology. Durable, reliable, resistant to water and harsh chemicals .
- Digital timer with 5 settings, suitable for different applications
- Industrial grade IC, moisture-proofed PCB and cooling fan. Improved product durability.
- Detachable power cord, convenient to use.

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 ----------½
Items Not Suitable for Ultrasonic Cleaning ----------2
Applications ----------3
Sample Applications ----------4
Product Exploded View ----------5/6
Dirt Elimination Processes----------7
Product Structure and Accessories ----------7
Common Cleaning Methods ----------8
Use of Optional Accessories ----------8
Operation Guidelines ----------9/10
Care and Maintenance ----------11
Specifications ----------12

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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 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:

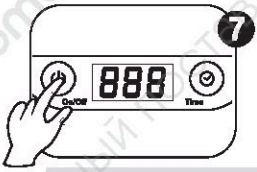
Danger of electrical shock! Do not use while bathing. Never immerse the device or the power cord in water or other liquid.

- **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:

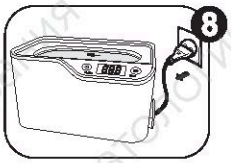
- Never block the vents on the device. Keep the vents free from lint, hair and other materials.
- Do not place the device on a soft surface, such as a bed or a couch, where the vents could be blocked.
- Observe the other warnings in the previous section.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

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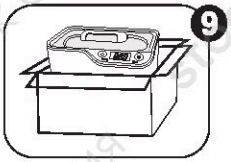
If you need to end the process ahead of time, press "On/Off" button. If you need to repeat the cycle or increase the time, press Time button to select desired time then press "On/Off" button again to restart it.

⚠ ***Important!*** *Long cycle time will cause heat to build up inside the unit and water temperature to rise. Do not use the unit for more than 30 minutes continuously. Take a 10-minute break in between to prolong the life of the unit.*



When cleaning is done, unplug the power cord, remove the lid, pour water out in the direction shown. Wipe it clean.

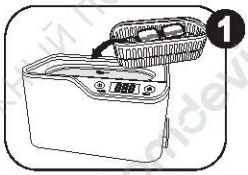
Do not pour water over the power socket. If it's wet, stop using and wait until it is dry.



Store the unit in a cool and dry place.

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OPERATION GUIDELINES



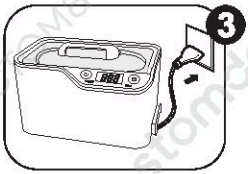
Remove the lid, place the object to be cleaned inside the basket then in the stainless steel tank.

Note: *Put small and delicate items with sharp edges into plastic basket for cleaning to avoid scratches. Basket will absorb about 30%~40% of ultrasonic energy hence reduce cleaning effectiveness.*

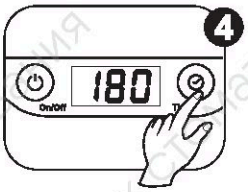


Fill the tank with tap water.
The liquid must cover the object to be cleaned, but not exceed "MAX" line.

⚠ *Dry burning over 30 seconds will reduce the lifespan of machine, when the tank is empty without water. What's worse, it will damage the machine it self some times.*

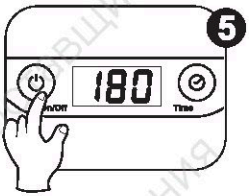


Put the lid on, plug in the power cord.
- 180 appears in the display window.
- This is the default time and is good for normal cleaning.



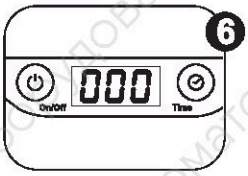
Select desired time setting by pressing Time button:

→180S→ 300S→ 480S→ 600S→ 90S →



Press "On/Off" button to start the cleaning process.
The timer starts to count down to zero.

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



When the timer counts down to zero, the cleaning process stops automatically and the display shows 000.

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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.

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APPLICATIONS



Optical Stores:
Optical stores can use ultrasonic cleaners to provide valuable services. Use ultrasonic cleaner and tap water to remove the debris on the lenses, hidden in the rims and nose pads so the eye wear gets professional cleaning and care.



Jewelry Stores:
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 shine.



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.



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.

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.

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COMMON CLEANING METHODS

REGULAR CLEANING



Use tap water only

Cleaning Method:

1. Put the items to be cleaned inside the basket and put the basket inside the tank (or put the items inside the tank directly).
2. Add water to the cleaning tank to a level between "MIN" and "MAX" lines and above the area to be cleaned. Select desired time setting by pressing Time button.
3. Press "On/Off" button to start cleaning.

Note: *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.*

ENHANCED CLEANING



Add appropriate cleaning solutions to water

Cleaning solution can be added to enhance cleaning. Dish detergent can be used in general.
Typical mixing ratio is one part of solution to ten parts of water. Once it's done, run it with water only for another 90 seconds to remove residual cleaning solution.

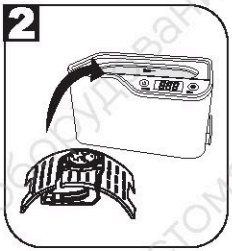
USE OF OPTIONAL ACCESSORIES



BASKET

Use the basket to clean small and delicate items. Ensure items not touching each other if cleaning multiple and delicate items.

Note: *Plastic basket absorbs about 30% to 40% of ultrasonic energy hence reduces cleaning effectiveness.*



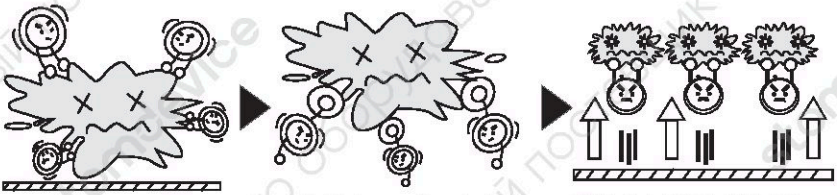
WATCH STAND

Use the watch stand to keep watch body above water while cleaning wristband.

Important: *For diver's watch with depth less than 50 m (150 ft), water may get inside if watch body is submerged in the water using an ultrasonic cleaner.*

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DIRT ELIMINATION PROCESSES

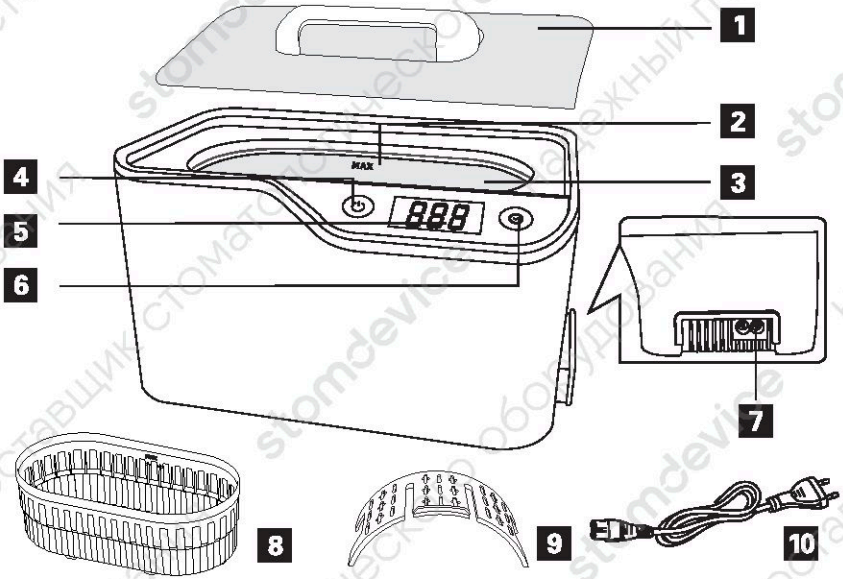


Many tiny bubbles are created when ultrasonic sound is passed through liquid.

Bubble are imploded constantly under the ultrasonic.

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

PRODUCT STRUCTURE AND ACCESSORIES

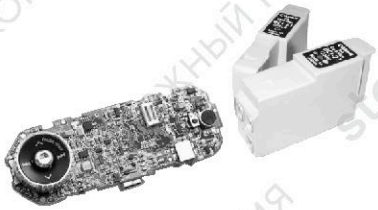


1 VIEWING WINDOW
2 "MAX" MARK
3 STAINLESS STEEL TANK
4 ON/OFF BUTTON
5 DIGITAL DISPLAY
6 TIMER BUTTON
7 POWER SOCKET
8 PLASTIC BASKET
9 WATCH STAND
10 POWER CORD

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SAMPLE APPLICATIONS

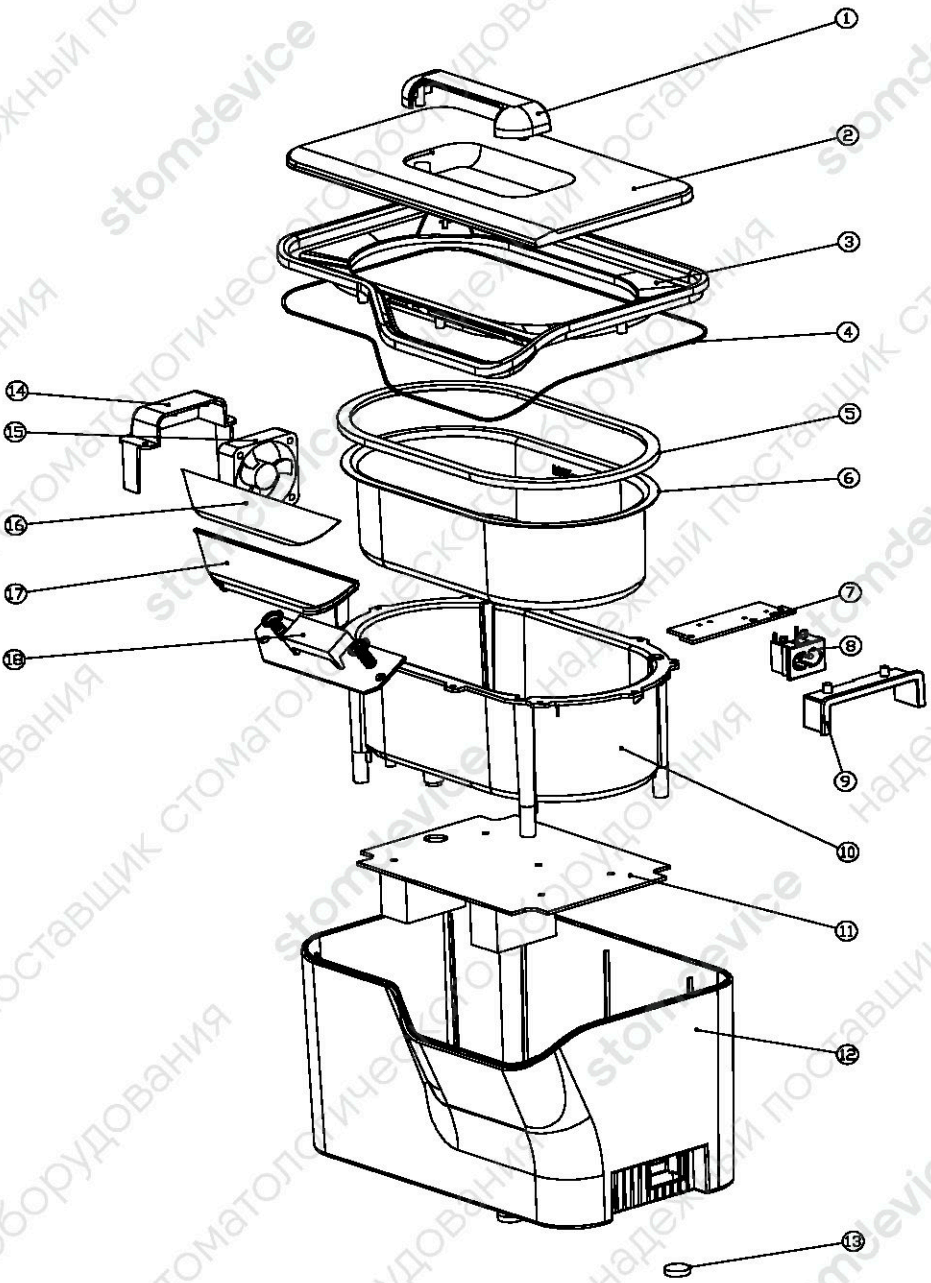
Eyeglasses	Jewelry
	
Eyeglasses, sunglasses, etc.	Necklaces, rings, earrings, bracelets, etc.

Precision Parts	PCB, Inkjet Cartridges
	
Precision bearings, gears and watch parts, etc.	PCBs from mobile phones and MP4, ink cartridges, etc.

Personal Items	Children and Baby Item Cosmetic products
	
Watch bands, diver's watches, dentures, braces, shaver heads, etc.	Toys, baby items, cosmetic products, etc.

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PRODUCT EXPLODED VIEW



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CDS-100		
No.	**Item**	**Material**
①	Lid handle	ABS
②	Lid-window	AS
③	Top ring	ABS
④	Type O sealing ring	Standard part
⑤	Silicon seal	Standard part
⑥	Stainless steel tank	SUS304
⑦	Mini power PCB	94V0
⑧	Power socket	Standard part
⑨	Water baffle	ABS
⑩	Inner tank	ABS
⑪	Main PCB	94V0
⑫	Main housing	ABS
⑬	Rubber grommets	Silicone rubber
⑭	cooling fan casing	ABS
⑮	Cooling fan	Standard part
⑯	Cover film	PC
⑰	Control panel cover	PMMA
⑱	Control PCB	94V0

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SPECIFICATIONS

Description	Digital Ultrasonic Cleaner	
Model	CDS-100	
Tank Capacity	600 ml 0.64 quart (US)	Max.500 ml / 0.53 quart (US)
Tank Size	16.1x8.5x5.0 cm / 6.34"x3.35"x1.97"	
Longest Item Fits inside Tank	16.1 cm / 6.34"	
Power Supply	30 W (AC 100 V, 50/60 Hz)	
	35W (AC 100-120 V, 50/60 Hz)	
	50 W (AC 220-240 V, 50/60 Hz)	
Digital Timer Settings	┌→ 180S → 300S → 480S → 600S → 90S ┐	
Ultrasonic Frequency	42,000 Hz	
Tank Material	Stainless Steel SUS304	
Housing Material	ABS	
Net Weight	0.98 kg / 2.16 lb	
Gross Weight	1.23 kg / 2.72 lb	
Unit Size	20.4x14.0x13.0 cm / 8.04" x 5.52" x 5.12"	
Inner Carton Size	23.8x16.7x16.1cm / 9.37" x 6.58" x 6.34"	
Qty per Master Carton	8 pcs	
Master Carton Size	49.2x36.0x34.2cm / 19.4"x14.2"x13.5"	

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