

Axia

## Ultrasonic Cleaners

### User Manual



## User Manual

1. Please read this user manual before operating the ultrasonic cleaner.
2. Keep this user manual for your reference.

## Models

- Mechanical Model (without heater)
- Mechanical Model (with knob timer and heater)
- Digital Model (with digital timer and heater)
- Power Adjustable Model (with timer, heater, and adjustable power)

## Applications

Electronics factories, automotive workshops, industrial and mining factories, watch and jewelry shops, laboratories, hospitals, dental clinics, mobile phone repair shops, and general household use.

## Cautions

Thank you for your purchase of the Axia ultrasonic cleaner. Please read the user manual thoroughly before operating the unit to avoid damages and danger to personal safety. Please store this manual and keep it for reference.

- Ensure the power supply is in the rated range before the power cable is connected. Refitting with a new power supply is strictly prohibited. Damage to the control panel can occur if cleaned with organic, strong acidic, and strong alkali solutions.
- Make sure the ground wiring is connected before use.
- Make sure the power key or knob is set to the "OFF" position before use.
- Do not operate the ultrasonic cleaner if the tank is empty, or damage may occur. If heating is needed, the water level shouldn't be less than 2/3.
- Make sure the lid is closed during operation to prevent burns from steam and reduce noise.
- Do not relocate the unit while full with fluid. Water-soluble solutions for bench-top ultrasonic cleaners is recommended. Do not use strong acid or flammable cleaners.

Do not use the machine in severe conditions.

- In areas with frequent temperature changes.
- In areas with high humidity and could easily produce condensation.
- In areas with strong vibrations.
- In an area with corrosive gas or dust.
- In an area with frequent water, oil, or chemical splashes.
- In areas with explosive and flammable gases.
- After running for over 30 minutes, shut the unit off for a few minutes and let the heat dissipate before using again.

Do not use heater when using a flammable liquid such as alcohol or solvent cleaner.

## Operating Procedure

- Before starting the cleaner, check the unit for any loose parts.
- Make sure the cleaner is in a dry and cool environment and is on a stable and flat working platform.
- Depending on the quantity and size of the objects being cleaned, adding a small amount of detergent may help improve cleaning quality.
- Do not run the unit with an empty tank.
- Make sure the power is properly connected before starting the unit.

### Operating Instructions: Mechanical Models

- To start ultrasonic cleaning, rotate the dial clockwise to the desired time. Time selection ranges from 0-30 minutes. When the indicator light turns on and the cleaner starts making a "ZIZI" sound, the unit has started ultrasonic cleaning.
- To start heating, adjust the temperature knob to the desired temperature. Typically, between 40-60°C is best.

### To stop cleaning.

- Press the off button once, the indicator light should be off.
- Rotate the temperature knob to the "OFF" position, the indicator light should be off.
- Turn the power switch off and disconnect the power.
- Empty out the liquid and clean the tank and unit with clean cloth before using again.

### Operating Instructions: Digital Models

- Setting the timer, when the power is connected the default setting is "05:00". Press "TIME+" once to increase the time by 1-minute increments. Press "TIME-" once to decrease the time by 1 minute.
- Setting the temperature, when the power is connected the default setting is "50°C". The "Actual" display is the current tank temperature. Press "TEMP+" once to increase the temperature by 1°C. Press "TEMP-" once to decrease the temperature by 1°C. If the set temperature is lower than the actual tank temperature, the heating function will stop automatically. When the temperature rises to the set temperature, the indicator light will turn off. When the unit is operating both the set and actual displays will be on until the temperature has been reached.
- After setting the time and temperature, press "ON/OFF" once and the unit will operate automatically. Press "ON/OFF" again and the unit will stop. After a successful cleaning, turn off the unit, disconnect the power, empty the liquid and clean the tank with a clean cloth for the next use.

### Adjusting Power

- This function is only available for power-adjustable models. Rotate the power knob slowly clockwise to increase the power from 40% to 100%. Rotate the power knob slowly counterclockwise to decrease the power.

### Cleaning Applications

- PCB, jewelry, electronic components, automotive parts, hardware, metal tools, computer parts, laboratory instruments, clocks and watches, eyeglasses, contact lenses, dentures, dental tools, DVDs and CDs, golf equipment, table utensils, printer inkjets, combs, toothbrushes, coins, etc.

Industry	Products and Materials	Dirt and debris
Semi-conductors	Integrated circuit, power tube, silicon wafer, diode, lead frame capillary, tray, etc.	Hards, etching oil, stamping oil, polishing wax, dust particles
Electrical and Electronic Machines	Tube parts, cathode ray tube, printed circuit board, quartz parts, electronic components, telephone switching equipment, speak components, power meter, LCD glass, core iron parts, computer floppy disk, video parts, hoop parts, head, photo die mask, etc.	Finger print, powder, cutting oil, stamping oil, iron filings, polishing materials, walnut powder, polishing wax, resin, dust, etc.
Precision Machines	Bearing, sewing machine parts, typewriter, textile machine, optical mechanical device, gas valve, watches, cameras, metal filter element, etc.	Machine cutting oil, iron filings, polishing powder, finger print, oil, grease, dirt, etc.
Optical Devices	Glasses, lens, prism, optical lens, filter lens, glass device, film, optical fiber, etc.	Plastic, resin, paraffin, finger printing, etc.
Hardware and Machinery Parts	Bearing, gear, ball, metal shaft parts, tools, adjustable valve, cylinder parts, burner, compressors, hydraulic press, gun and ultracentrifuge, city water faucet, etc.	Cutting oil, iron filing, grease, polishing powder, fingerprinting, etc.
Medical Instruments	Medical instruments, dentures, etc.	Iron filings, polishing powder, oil, stamping oil, dirt, etc.
Electroplates	Galvanized parts, mold, stamping parts, etc.	Polishing scrap iron, oil, black iron shell, rust, oxidation shell, scrap iron, polishing powder, stamping oil, dirt, etc.
Car Parts	Piston ring, carburetor, flow meter housing, compressor shell, electrical components, etc.	Iron filings, polishing powder, oil, stamping oil, dirt, etc.
Chemical Fiber	Chemical or artificial fiber nozzle filter protector, chemical fiber texture, etc.	Chemical colloid, glue, and other solid material, dust, etc.

## Types of Cleaning

### Maintenance

- The ultrasonic cleaner must be opened by an authorized specialist.
- Clean the contaminant in the tank frequently.

### Troubleshooting

#	Issue	Possible Causes	Solutions	Notes
1	No ultrasonic	A. Power supply not connected. B. Fuse Broken. C. Cable short circuit. D. Transducer short circuit. E. PCB board broken. F. Other reasons	A. Check plug and power switch. B. Check fitted power supply and replace fuse. C. Connect fitted cable or replace with new one. D. Inquire to our service engineer. E. Check the broken part and replace it. F. Inquire to our service engineer.	
2	Time Control Failure	A. Timer knob out of control. B. Timer failure C. Other reasons	A. Loosen or tighten the screw. B. Replace timer or digital panel. C. Inquire to our service engineer.	
3	No Heating	A. Bad connection between heater power switch. B. Fuse broken. C. Heating pad burnt out. D. Digital display board out of control. E. Other reasons.	A. Check that heating plug has a good connection. Check power and resistance from mains power. B. Replace fuse. C. Replace bad heating pad. D. Check and replace broken parts. E. Inquire to our service engineer.	Suggestion 50-60°C
5	Temperature control failure	A. Thermostat is loose. B. Thermostat tube is broken. C. Digital display is out of control. D. Other reasons.	A. Fasten the thermostat. B. Replace the thermostat. C. Check and replace broken parts. D. Inquire to our service engineer.	
6	Not Cleaning Well	A. Ultrasonic is not cleaning well. B. Liquid is too high or too low. C. Temperature is too high or too low. D. Not suitable cleaning solution used. E. Other reasons.	A. Reconnect ultrasonic button and adjust it. B. Adjust liquid to the correct amount. C. Adjust temperature to the correct temperature. D. Stop unit, switch off power supply, replace with suitable liquid after cool down. E. Inquire to our service engineer.	
7	Other problems			

### General Cleaning

- Use only warm tap water. About 50°C

### Enhanced Cleaning

- Add a few drops of standard washing liquid, liquid soap, or detergent into water, other non-acidic cleaning agents can also be used.

### Extensive Cleaning

- For removing tarnish, carbon and rust from non-plated metals it's recommended to use special cleaning solution combined with using ultrasonic cleaner.

**WARNING:** Strong acid or alkaline cleaning solution will cause corrosion, rust, and even puncture the tank or body of the unit. To overcome this problem, dilute to mild pH solution.

The cleaning solution will deteriorate in effectiveness over time and use. It is important to regularly change the fluid and carefully wash the inside of the cleaning tank to preserve the effectiveness and longevity of the ultrasonic cleaner. Do not use corrosive or abrasive cleaning products in the tank. The tank must be wiped down and dried before it can be reconnected to the electrical supply.

### For better cleaning:

- Items should be fully submerged into the water. (do not exceed the "MAX" mark)
- Warm water and a small amount of washing liquid will help increase cleaning performance.
- Make sure there is space between around each part you put into the tank. The more items that are in the tank will decrease the cleaning efficiency. It's not advised to overlap items.
- Basket use: Do not put items directly into the bottom of the tank; you will find that there is a better cleaning effect with a suitable basket. A metal basket absorbs less ultrasonic energy.
- Temperature: The higher temperature, the better cleaning effect. However, when temperatures exceed 70°C~80°C, cleaning effect will be affected. The best temperature for cleaning is between 40°C~50°C.