

ULTRASONIC RECORD CLEANER DIY AUTOMATIC DRIVE



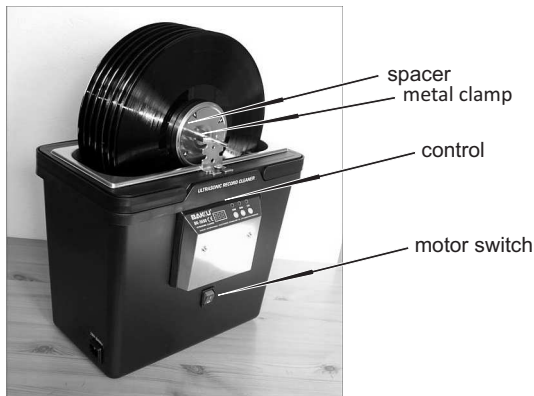
Our ultrasonic record cleaning device is simply constructed based on ready-made components available in DIY stores, and is designed for vinyl record lovers who are not satisfied with mechanical cleaners such as “Knosti”.

Ultrasonic cleaning uses cavitation bubbles induced by high frequency pressure (sound) waves to agitate a liquid solution. The agitation produces large forces on contaminants adhering to substrates such as metals, plastics, glass, rubber, and ceramics. This action also penetrates into blind holes, cracks, and recesses. The intention is to thoroughly remove all traces of contamination tightly adhering to or embedded in solid surfaces. Water or solvents can be used, depending on the type of contamination and the workpiece. Contaminants can include dust, dirt, oil, pigments, rust, grease, algae, fungus, bacteria, limescale, polishing compounds, flux agents, fingerprints, soot wax and mould release agents, and biological soiling including blood. Ultrasonic cleaning can be used for a wide range of workpiece shapes, sizes, and materials, and does not require the part to be disassembled prior to cleaning. Objects must not be allowed to rest on the bottom of the cleaning device during the cleaning process, because that will prevent cavitation on the part of the object not in contact with the liquid.

Vinyl records are very sensitive to contamination and mechanical damage, which causes unwanted noises and crackles during playing. Record condition deteriorates with improper storage and handling, leading to reduced listening quality. Mechanical damage (“scratches” and “scuffs”) is difficult to fix. However, the most common cause of noise is dirt. Careful listening (preferably on headphones) reveals that interference from scratches is heard in mono and from dirt in stereo.

Ultrasonic cleaners are often used by professionals, including vinyl record retailers, to revitalize older records because they cannot be effectively cleaned with mechanical cleaners. These devices are expensive (\$3,000 to \$4,000), and thus tend not to be used at home.

We offer you a simplified and effective device. It does not have a heater, fluid filtration, drying, and other expensive features. Instead, it has a simple design that is affordable for enthusiasts who appreciate that cleanliness is essential for good sounding music.



Operation of the cleaner

The device is designed for wet cleaning of 12" vinyl long-playing records. Spacer discs are needed for washing singles (7") - these are not supplied, but you can use your common 7" vinyl adapter for singles.

The cleaner is an independent construction using low-cost components, based on years of experience in cleaning and revitalizing old and damaged vinyl records. It is perfectly suited for the hobbyist, and is not intended for professional use.

The cleaner has an automatic drive.

To begin cleaning, slide a spacer onto the metal axle, then put a record on, before adding the next spacer, until 7 records are loaded. Then secure the metal clamp with the black markers on the outside. Place onto the device with the stainless steel container, and put into the flexible motor axis. You need to use some "push force"

Fill container with washing liquid consisting of:

Isopropyl Alcohol 96% - 0,7 litre (available in electronics stores)

Take care because the isopropyl is very poisonous; you need ventilation!

Demineralized water - 4 litres

Mirasol liquid (TETENAL) or Ilfotol (Ilford) - 10 mils.

(or you can use a few drops of natural dishwashing liquid)

For best result is very important to use liquid with such a composition.

Liquid is reusable. In 5 liter bath you can wash up to 200 records, filtering time to time (e.g. using coffee filter).



After dipping the records into the liquid, fill the tank with demineralised water to a level below the edge of the record labels.

Insert the power plug into the socket. Moving lines appear on the display. Press the button marked "50". Set about 300 seconds on display, then press the start button until you hear the characteristic buzz. Washing starts.

In the case of very dirty record it is recommended to do "prewash" without using motor:

set axis with records the black marker "1" up (on first spacer), set 300 seconds and start washing.

After automatic switch off, turn the records through 90 degrees and repeat the operations for each quarter of the record surface so that each is subjected to washing for 300 seconds.

After that do the "normal" washing.

Time of washing is very individual process, and depends on the condition of the vinyl record.

Sometimes, in the case of heavily polluted record you must repeat operation for 2 or 3 times.

Spacers, when well fitted, protect labels enough.

Do not operate the cleaner without liquid because this may damage the device.

Do not run the cleaner for more than 30 minutes in total for a single session.

Take at least a 20 minute break to let the ultrasonic device rest.

To enhance the action of the ultrasound, you can warm the fluid with the electric heater to 40-50 degrees C.

After washing, remove the set and put the whole on a towel or cloth and allow to dry (or use vacuum attachment).

After drying (about 30 minutes), unscrew the set and wipe the edges of the records with a soft cloth. Then insert each newly cleaned disc into a new inner sleeve.

After the wash, you can pour the liquid through a tube into the plastic container. The litter remains on the bottom of the tray, and must be removed by wiping it off with a paper towel.

Safetycautions:

- Take normal voltages of the power source to energize the machine.
- Never operate the device without any liquid in the tank.
- Never operate the machine more than 30 minutes of running
- Put the machine equilbratory, keep it surroundings clearly, wipe and dry out the cleaning solutions spoiled out from the tank of any, and avoid the machine to be collided by hard object.
- Never overfill the tank more than up to record label.
- Never immerse the machine or power cord in water or other liquid.
- DO NOT touch the power plug with wet hands, especially when inserting or removing the plug.
- DO NOT disassemble the machine, except by professionals.
- UNPLUG the power source whilefilling or emptying the tank
- DO NOT spray water or liquid over the device and control panel.
- DO NOT operate the machine without proper groundig.
- DO NOT place the machine on a soft surface, where the vents could be blocked
- Always turn the heater off after using as leaving it on can cause the fluid to evaporate and damage the internal components.
- In case of failure/emergency, disconnect the mains supply by removing the plug from mains socket.

Technical:

Dimensions

39 cm x 29 cm x 41 cm

Power 50W

Power supply 230V ~ 50/60Hz

Ultrasonic frequency ~ 40KHz

Engine speed - 2,5 r/min.

The kit consists of: ultrasonic cleaner, power lead, drive system, axle with spacers and metal clamps, axle base, some spare parts, and the manual.

The cleaning fluid is not included.

Power supply 230 V. For United States and other countries with 110 V you need a power converter (110V – 230V) available on Ebay.

Important ! Converter must give 100W output power or more