Operating instructions ENESKAsonic
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Notes about these instructions

These operating instructions enable the operator to operate, care for and maintain the ENESKAsonic system correctly. These operating instructions are part of the system and must always be kept at hand at the place of use. If the ENESKAsonic system is passed on to a third party then these operating instructions must be passed on too.

Instructions which must be strictly observed to prevent hazards or damage are marked as follows:

**Warning!**
Warns of hazards that could result in serious injury or death.

**Caution!**
Warns of hazards that can lead to damage to objects.

For technical problems or other questions please contact our service department.

Product overview

![Diagram](image)

**Fig. 1**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ENESKAsonic control unit</td>
</tr>
<tr>
<td>2</td>
<td>Ultrasonic handpiece</td>
</tr>
<tr>
<td>3</td>
<td>Handpiece cable</td>
</tr>
</tbody>
</table>

Parts supplied for an ENESKAsonic ultrasonic system

- 1 x ENESKAsonic ultrasonic system, control unit (order no. 0 012 001)
- 1 x ENESKAsonic ultrasonic system, handpiece JUS-45 PB-ES (order no. 0 012 003)
- 1 x ENESKAmicro handpiece rest standard, black (order no. 0 011 110)
- 1 x ENESKAsonic display guard, made of hardened glass (order no. 0 011 098-G)
- 1 x mains cable set for Germany, Switzerland, England and Europe (order no. 0 007 435-1)
- 2 x fuses 4 A TR250 V / 5 x 20 mm (order no. 1 711 407-1) for 110 V use
- 1 x Allen key (order no. 0 006 304)
- 2 x 10 mm spanner (order no. 0 006 347)
- 1 x tool holder hole dia. 3 mm, thread M6 x 0.9 (order no. 0 006 306-E)
- 1 x tool holder slit width 1 mm, thread M6 x 0.9 (order no. 0 006 310-E)
- 1 x ENESKAsonic, starter set ceramic fibre file NEW Super Stone, 3 items in a box (order no. 0 012 007)
Technical data for ENESKAsonic control unit

<table>
<thead>
<tr>
<th>Connections</th>
<th>2 connections for ultrasonic handpieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>115 / 230 V, 50 / 60 Hz, 150 VA</td>
</tr>
<tr>
<td>Power consumption</td>
<td>max. 80 W</td>
</tr>
<tr>
<td>Frequency range</td>
<td>20–40 kHz</td>
</tr>
<tr>
<td>Power supply socket fuse</td>
<td>16 A</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>135 x 235 x 200 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>2.7 kg</td>
</tr>
<tr>
<td>Ambient conditions</td>
<td>0°C to +40°C</td>
</tr>
<tr>
<td></td>
<td>10% to 85% humidity</td>
</tr>
<tr>
<td>Noise pressure level</td>
<td>&lt; 70 dB (A)</td>
</tr>
<tr>
<td>Permissible handpieces</td>
<td>JUS-45 PB-ES; 50 W, 22.5 kHz (40 μm)</td>
</tr>
<tr>
<td></td>
<td>JUS-50 ES; 50 W, 22.5 kHz (40 μm)</td>
</tr>
<tr>
<td>Approved threaded connection</td>
<td>Thread M6/FINE (M6 x 0.9)</td>
</tr>
<tr>
<td>for the handpiece</td>
<td></td>
</tr>
<tr>
<td>USB type A interface</td>
<td>Charging voltage 5 V at 1.8 A</td>
</tr>
</tbody>
</table>

The manufacturer’s logo, type designation, CE mark and serial number are located on the back of the control unit and on the housing of the handpiece.

A complete overview of accessories can be found in the JOKE catalogue for surface treatment, in the "Drive systems and handpieces" chapter.

The list of spare parts and the declaration of conformity are available online at www.joke-technology.de.

Safety

Intended use
ENESKAsonic systems are designed exclusively for removing material, deburring, lapping and polishing with a straight motion.
ENESKAsonic systems may only be used with approved components and accessories (see chapter 3, Technical specifications).
The values specified in the technical specifications of the individual components must not be exceeded when working with the ENESKAsonic system.
ENESKAsonic control units may only be used as described in these operating instructions. Any other use or use going beyond this is considered improper use. The manufacturer will not be liable for damage resulting from improper use.

General safety instructions
To avoid danger to persons and material damage, ALWAYS observe the following safety instructions:
• Only use ENESKAsonic systems in technically perfect condition.
• Always place the ENESKAsonic system control unit on a safe, non-slip surface and protect it from contact with liquids.
• When working with the ENESKAsonic system, always wear safety glasses, gloves and hearing protection.
• Never disconnect the handpiece from the control unit while it is switched on!
• Always switch off the control unit when the system is not in use.
• Always ensure sufficient extraction of any dust particles that may arise.
• Always make sure that the device’s ventilation slots are free (see also chapter 9).
• Do not leave the ENESKAsonic system unattended when switched on.
• Immediately rectify faults in the ENESKAsonic system yourself or have them rectified in accordance with these instructions.
• Do not make any changes, additions or modifications to the individual components of the ENESKAsonic system.
• Never immerse the individual components of the ENESKAsonic system in water or other liquids.
• Do not use the system outdoors.

### Controls and indicators

![Diagram of ENESKAsonic system with labels]

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power switch</td>
</tr>
<tr>
<td>2</td>
<td>MEM button</td>
</tr>
<tr>
<td>3</td>
<td>BOOST button</td>
</tr>
<tr>
<td>4</td>
<td>TUNE button</td>
</tr>
<tr>
<td>5</td>
<td>Left LED strip</td>
</tr>
<tr>
<td>6</td>
<td>Upper LED strip</td>
</tr>
<tr>
<td>7</td>
<td>Carrying handle</td>
</tr>
<tr>
<td>8</td>
<td>Handpiece rest</td>
</tr>
<tr>
<td>9</td>
<td>Display</td>
</tr>
<tr>
<td>10</td>
<td>Channel button [A]</td>
</tr>
<tr>
<td>11</td>
<td>Channel button [B]</td>
</tr>
<tr>
<td>12</td>
<td>Button [C]</td>
</tr>
<tr>
<td>13</td>
<td>Right LED strip</td>
</tr>
<tr>
<td>14</td>
<td>Rotary control knob</td>
</tr>
<tr>
<td>15</td>
<td>Lower LED strip</td>
</tr>
<tr>
<td>16</td>
<td>Connection B</td>
</tr>
<tr>
<td>17</td>
<td>Connection A</td>
</tr>
<tr>
<td>18</td>
<td>USB connection with dust flap</td>
</tr>
<tr>
<td>19</td>
<td>Foot pedal connection</td>
</tr>
<tr>
<td>20</td>
<td>Fuse</td>
</tr>
<tr>
<td>21</td>
<td>Mains plug connection</td>
</tr>
<tr>
<td>22</td>
<td>Ultrasonic handpiece</td>
</tr>
<tr>
<td>23</td>
<td>Tool (flat)</td>
</tr>
<tr>
<td>24</td>
<td>Protective cap</td>
</tr>
<tr>
<td>25</td>
<td>Protective pin</td>
</tr>
<tr>
<td>26</td>
<td>Tool holder for flat tools</td>
</tr>
<tr>
<td>27</td>
<td>Tool holder for round tools</td>
</tr>
<tr>
<td>28</td>
<td>Indicator for the BOOST function</td>
</tr>
<tr>
<td>29</td>
<td>Power indication as bars</td>
</tr>
<tr>
<td>30</td>
<td>Frequency display (kHz)</td>
</tr>
<tr>
<td>31</td>
<td>Indicator for handpiece inserted</td>
</tr>
<tr>
<td>32</td>
<td>Indicator for foot pedal inserted</td>
</tr>
<tr>
<td>33</td>
<td>Power indicator in %</td>
</tr>
<tr>
<td>34</td>
<td>Display of timer function</td>
</tr>
</tbody>
</table>
The function of the signal sounds

2 brief sounds
- After TUNE process: Device is ready to use
- Settings accepted e.g. after saving

1 long sound
- Device error or faulty operation
  Troubleshooting or device restart required

Functions of the LED display strips

<table>
<thead>
<tr>
<th>LED strip</th>
<th>Colour</th>
<th>Type of display</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>Blue</td>
<td>Pulsing</td>
<td>Handpiece is connected</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>Lights</td>
<td>TUNE in progress</td>
</tr>
<tr>
<td></td>
<td>Blue-white</td>
<td>Movement towards the centre</td>
<td>Handpiece is switched on</td>
</tr>
<tr>
<td>Bottom</td>
<td>Green</td>
<td>Lights (2 LEDs, central)</td>
<td>Optimum working point</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Lights (2 LEDs, not central)</td>
<td>Optimum working point has shifted</td>
</tr>
<tr>
<td></td>
<td>Yellow to red</td>
<td>LED moves to left and right</td>
<td>Tool cannot be aligned</td>
</tr>
<tr>
<td></td>
<td>Colourful</td>
<td>LED moves to left and right</td>
<td>The device is looking for the working point</td>
</tr>
<tr>
<td>Right</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Left</td>
<td>White</td>
<td>Drop-down effect:</td>
<td>Idling, timer is expiring</td>
</tr>
<tr>
<td>Top., bottom</td>
<td>Red</td>
<td>Lights</td>
<td>Device error or faulty operation</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>Lights and buttons flash simultaneously</td>
<td>Serious device fault or dangerous operating error, restart required</td>
</tr>
<tr>
<td>All</td>
<td>White (right, left), Blue (top, bottom)</td>
<td>Lights</td>
<td>Important information in the display</td>
</tr>
<tr>
<td></td>
<td>Colourful</td>
<td>Flashing and motion</td>
<td>Device starts or animation is running</td>
</tr>
</tbody>
</table>
Function of the ventilation

Fig. 4
The ventilation serves to prevent overheating. Fresh air is supplied through the front slots. Heated air is discharged from the top of the control unit. An integrated carbon filter retains the moisture.
Always keep the unit’s ventilation slots clear to prevent damage from overheating.

Calling up the menu and navigating

Fig. 5
Press the rotary control knob twice:
• Call up the main menu

Fig. 6
Press the rotary control knob once:
• Call up the selected menu
• Confirm selection
• Activate a value to be able to change it

Turn the rotary control knob clockwise
• Selection bar will jump one position down
• Activated value counts up

Press the MEM button
• Save the setting just made

Press the [C] button several times
• Return to standard display

Press the [C] button
• Escape / Back [ESC]
• Return to previous menu

Press the [C] button twice:
• Call up the main menu

Press the [C] button once:
• Call up the selected menu
• Confirm selection
• Activate a value to be able to change it

Turn the rotary control knob clockwise
• Selection bar will jump one position down
• Activated value counts up

Fig. 7
Press the MEM button
• Save the setting just made

Press the [C] button
• Escape / Back [ESC]
• Return to previous menu

Press the [C] button twice:
• Call up the main menu

Press the [C] button once:
• Call up the selected menu
• Confirm selection
• Activate a value to be able to change it

Turn the rotary control knob clockwise
• Selection bar will jump one position down
• Activated value counts up

Press the MEM button
• Save the setting just made

Press the [C] button several times
• Return to standard display

Fig. 8
Start up

Replace the fuse (if necessary)

The control unit is factory set to 230 V and equipped with two 2 A fuses. One of these two is intended to be a spare. Two 4 A fuses are also included.

Caution!

Only use the following fuses:
- Microfuse 5 x 20 mm, T4L 250 V for 115 V
- Microfuse 5 x 20 mm, T2L 250 V for 230 V

Connecting a handpiece

Caution!

Always plug the cable into the control unit’s socket so that the double arrow on the connection cable and the guide strip of the protective cap point towards the white arrow on the connection socket. Do not damage the contacts while doing that!
Mounting/changing the tool holder and tool

Warning!
To avoid injuries caused by the tool vibrating unintentionally, only connect or change tools when the control unit is switched off.

Warning!
To avoid injury from tools coming loose, always tighten the tools carefully and regularly check the fit of the tool.

Caution!
To avoid damage to the components,
• thoroughly clean all parts before installing them and
• only use tools and adapters with a M6/FINE (M6 x 0.9) thread.

Fig. 11

Connecting the mains cable

Fig. 12
Switching the unit on

Fig. 13

Setting the language (if necessary)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x</td>
<td></td>
<td></td>
<td>C</td>
</tr>
</tbody>
</table>

Call up the main menu
Select “Sprache/Language”
Choose the language and save your choice
Back to the standard display

- ESC = MENU = Sprache/Language
- Timer
- G-Info
- Summer+LED
- Firmware Update

[MEM]=SAVE  [C]=ESC

Connecting the foot pedal (optional)

With a foot pedal the handpiece can be switched on and off with the foot during operation.

Fig. 14
Operation
While you are working, the system automatically determines the required power and adjusts it accordingly.
If an adapter is used, power may be lost.

Switching the unit on

Fig. 15

Selecting a handpiece
Several handpieces can be connected to the control unit at the same time, but only one handpiece can be used at a time.
The handpiece that was last connected to or was used with the control unit will automatically be selected. The channel button A or B belonging to this handpiece will flash. If necessary, press the other button to select the other channel on the control unit.

Switching the handpiece on

Caution!
To avoid damage to the device,
• equip the handpiece with a tool or protective pin before switching it on and do not work with the tool until the AUTO TUNE operation has been completed.
The system automatically determines the required frequency during the AUTO-TUNE procedure.
Choosing the power, BOOST function

Caution!
To avoid damage to tools or the workpiece:
• always start with a low power setting (1%) and then adjust the power as required, and
• for high power settings (> 50%), only use tools designed for this purpose!

Adjust the working point during operation (TUNE, if required)
The working point can shift at different power settings or wander away from the determined operating point due to heating and wear of the tool. This is indicated in the lower LED strip by the two green LEDs moving away from the centre. The TUNE function allows readjustment during the working process.

Caution!
To avoid damage to the unit or the tool,
• do not work with the tool while the TUNE operation is in progress.
**Stopping the handpiece**

**Fig. 19**

**Switch the unit off**

**Fig. 20**

**Testing the handpiece’s function**

To check the correct function of the handpiece in the event of a malfunction, carry out the following test:

» Mount the protective pin (see fig. 2, item 25).

» Switch the handpiece on at the lowest power level (1%).

» Immerse the tip of the protective pin briefly in water to wet it.

» Turn the power up to 100% with the rotary control knob: At about 80%, the water drop should atomise as a cloud.

» If this test is not successful, the handpiece is faulty. Contact JOKE service
### Setting the timer

As soon as a handpiece runs without load, a timer will count down and the left LED bar will show a drop-down effect. The handpiece will switch off as soon as the set time has elapsed. The factory setting is five minutes.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="1x.png" alt="Image" /></td>
<td><img src="2x.png" alt="Image" /></td>
<td><img src="3x.png" alt="Image" /></td>
<td><img src="4x.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Call up the main menu

Selecting a timer

Activate “Time in minutes” and set a time

Save and return to the standard display

---

### Calling up information about the unit

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="1x.png" alt="Image" /></td>
<td><img src="2x.png" alt="Image" /></td>
<td><img src="3x.png" alt="Image" /></td>
<td><img src="4x.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Call up the main menu

Select “G-Info”

Displaying version information and operating hours

Back to the standard display

---

1. Press the MEM button.
2. Select “Time in minutes” and set the desired time.
3. Confirm the setting.
4. The handpiece will switch off after the set time.

1. Press the C button.
2. Select “G-Info” to display the version information and operating hours.
3. Return to the standard display.
Setting the signal tone and LEDs

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="2x" /></td>
<td><img src="image2.png" alt="Select “Buzzer + LED”" /></td>
<td><img src="image3.png" alt="Make your settings" /></td>
<td><img src="image4.png" alt="Back to the standard display" /></td>
</tr>
</tbody>
</table>

- Call up the main menu
- Select “Buzzer + LED”
- Make your settings
- Back to the standard display

- Setting the contrast of the display
- Switching the signal tone on/off
- Setting the brightness of the LED signal strips
- Demonstrate the LED strips

USB interface

The USB interface on the rear of the device (see fig. 2) can be used, for example, as a connection for a USB LED spotlight for workplace lighting.

It is also used to upload new firmware and for service purposes.

If the USB interface is not in use, leave the dust cap closed.

Firmware update

Doing a firmware update

Fig. 21
Press the rotary control knob, keep pressing it and switch on the control unit. Keep pressing the knob until the "Load indicator" appears on the display. Then release the rotary control knob. The update will now be automatically installed.

Fig. 22

Fig. 23

Fig. 24

**Possible errors during a firmware update**

<table>
<thead>
<tr>
<th>Error code in the display</th>
<th>Explanation</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| 1                         | General error (e.g. USB stick removed too soon) | Restart control unit and try the update again.  
If the update still fails, contact JOKE service. |
| 3 / E                     | USB stick not recognized or data error      |        |
| 9                         | Data on the USB stick is invalid or unreadable. |        |
| B                         | Update not possible (e.g. due to wrong software version) |        |
Maintenance, care and disposal

The control unit should be serviced once a year by JOKE Service.
The handpiece requires no service.
All components should only be cleaned with a dry, soft cloth.
Dispose of all components properly and do not put them into household waste under any circumstances.

Troubleshooting and fixing faults

<table>
<thead>
<tr>
<th>Error message</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR</td>
<td>Serious system fault: A handpiece was removed from the control unit while it was switched on. This can destroy the device.</td>
<td>Restart the system. If the error persists, contact JOKE service.</td>
</tr>
<tr>
<td>WARNING</td>
<td>One handpiece or foot pedal was connected to or removed from the control unit while the other handpiece was switched on. This can destroy the device.</td>
<td>Acknowledge the error with the handpiece button A or B and continue working.</td>
</tr>
<tr>
<td>WARNING</td>
<td>Tool cannot be tuned (working point cannot be found).</td>
<td>Acknowledge the error with the handpiece button A or B. Check whether the tool may be used with the ENESKAsonic system. Correct that the tool and the tool holder are correctly seated. The tool must not be mounted too tightly or too loosely. There must also be no debris in the tool holder. Check tool and tool holder for damage. Start the TUNE operation manually with the TUNE button. Test the function of the handpiece (see chapter 15). If the error cannot be corrected, contact JOKE service.</td>
</tr>
<tr>
<td>WARNING</td>
<td>The control unit has been overloaded.</td>
<td>Acknowledge the error with the handpiece button A or B and continue working with reduced power.</td>
</tr>
<tr>
<td>WARNING</td>
<td>The control unit has been overheated.</td>
<td>Acknowledge the error with the handpiece button A or B and continue working with reduced power. Keep the ventilation slots clear and unobstructed.</td>
</tr>
<tr>
<td>WARNING</td>
<td>The working point could not be readjusted automatically during operation.</td>
<td>See “Tool fault”.</td>
</tr>
<tr>
<td>200 ... 208</td>
<td>Serious system fault:</td>
<td>Try to restart the system. If the error persists, contact JOKE service.</td>
</tr>
<tr>
<td>Fault</td>
<td>Cause</td>
<td>Remedy</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The display does not</td>
<td>The control unit is not switched on.</td>
<td>Switch the control unit on.</td>
</tr>
<tr>
<td>illuminate.</td>
<td>The power supply is not switched on.</td>
<td>Switch the power supply on.</td>
</tr>
<tr>
<td></td>
<td>The mains cable is not connected.</td>
<td>Connect the mains cable to the control unit and plug it in to the</td>
</tr>
<tr>
<td></td>
<td>The fuse in the control unit is faulty.</td>
<td>mains supply.</td>
</tr>
<tr>
<td></td>
<td>Control unit, cables, connections, contacts, mains switch or sockets</td>
<td>Replace the fuse.</td>
</tr>
<tr>
<td></td>
<td>are faulty.</td>
<td>Send unit and accessories to JOKE service for inspection or repair.</td>
</tr>
<tr>
<td>Handpiece doesn’t</td>
<td>Contacts are faulty.</td>
<td>Check the handpiece connections.</td>
</tr>
<tr>
<td>start.</td>
<td></td>
<td>Check the connections between the motor and its accessories.</td>
</tr>
<tr>
<td></td>
<td>Motor, circuit, cable, connections, contacts or sockets are faulty.</td>
<td>Send unit and accessories to JOKE service for inspection or repair.</td>
</tr>
<tr>
<td>The handpiece stops.</td>
<td>Automatic switch-off on idling</td>
<td>Switch the handpiece back on</td>
</tr>
</tbody>
</table>
Brilliant solutions for perfect surfaces

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