# Instruction Manual for ULTRAMAX® Mini

#500-0301, #500-0302





# 1. Parts and descriptions of Main unit



# 2. Prepare to use this machine

- 2.1 Please confirm the voltage before connecting the power supply.
- 2.2 Install a proper holder and tool into the Ultrasonic handpiece.

Select the proper tool holder (for burnishing carbide tip, ceramic stone, diamond file, etc.) to install in the ultrasonic handpiece.

To correctly install the tool holder and tighten it, you must use the **TOOL CHANGING RACK** along with the **WRENCH/SPANNER** to avoid damaging the handpiece. Not following these instructions can result in overheating the handpiece and **VOIDING THE WARRANTY**. See Fig. 1.

The tool accessory (carbide tip, ceramic stone, diamond file, etc.) **MUST** be securely tightened **(VERY TIGHT)** with the included tool, for proper operation of the handpiece. See Fig. 2.



Fig. 1



Fig. 2

- 2.3 Insert the handpiece cord into both the handset and main unit ⑤.
- 2.4 Turn on the power switch ①. The tracking indicator light ③ will be blinking green in color which shows it is tracing the correct frequency, this will take about 1-3 seconds.
- 2.5 After tracking period, tracking lamp light ③ will be a steady color indicating it is ready to use.
- 2.6 Adjust the output power 4.

The ultrasonic output can be set by the output power control knob ④, indicator lamp ③ will change from green to red when power output setting changes from low to high.

- 2.7 When in use, the holder must be securely tightened using the Tool Changing Rack. A loose connection will affect the output power that may lead to the main unit being unable to find the correct frequency. After use for a period of time, it is necessary to clean the contact surfaces on the holder, tools and handpiece to avoid foreign objects caught in between or avoid chip buildup on surfaces which would affect the output power.
- 2.8 If an unexpected noise is heard when using the lapping tools, turn off the unit as it is necessary to check if the tool and the holder are securely fastened. With these checked, if there is still a noise, it may be because the tool material is uneven or because of resonance of the polishing material. Restart the machine ① to activate the automatic frequency adjustment in order to solve this problem. If the problem persists, it will not affect the grinding outcome.
- 2.9 If after 3 seconds of turning on power if the tracking lamp ③ continues to blink, it means the controller can't track the correct frequency. Check the connecting cable and make certain the tool holder and the tool are securely fastened.

## 3. Foot Switch

- 3.1 The Foot Switch can be plugged in ⑥ any time during the use of the unit. Keep the Foot Switch depressed to produce output.
- 3.2 It is suggested to use the Foot Switch in order to avoid heating up the handpiece when not being used.

## 4. Other Notes

- 4.1 It is necessary to turn off the Power ① when changing lapping tools or polishing material. Restarting automatically adjusts the frequency.
- 4.2 When replacing tool holder or lapping tools use the appropriate changing tools (see Fig. 1 and Fig. 2). The Tool Changing Rack is essential when changing the Ultrasonic tools. Use of only the wrenches makes it impossible to securely fasten the tool and also might damage to the wires inside the handpiece!
- 4.3 Different Ultrasonic polishing materials use different frequencies of vibration. This requires the unit to be turned off each time you change material—automatically adjusting the frequency.
- 4.4 Please avoid impact, submersion, dampening, falling from a height, etc. All are actions which would void the one-year manufacturer's warranty.

