



# N7 MICROMOTOR ITEM # 34.550

## USER MANUAL

• PLEASE BE SURE TO READ THIS MANUAL BEFORE OPERATION.

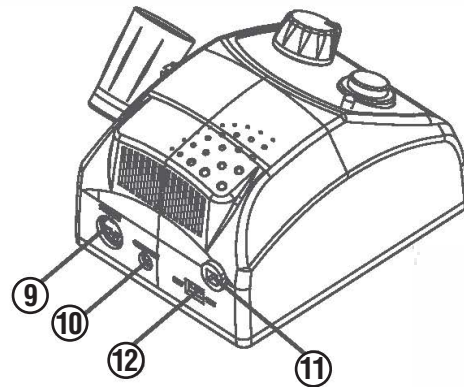
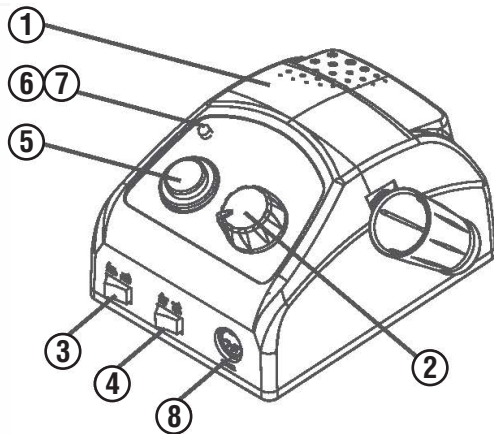
### 1. PRECAUTIONS

- Install the unit at the workstation. The unit must be used in a clean environment, avoiding hot and humid conditions. (-4°F ~ 104°F, 0 ~ 90% RH).
- Please be careful not to drop the handpiece. It will damage the ball bearing or weaken durability of the motor.
- Please do not allow water or other liquids to spill onto or into the handpiece and control box.
- After replacing a bur, please make sure to close the chuck handle.
- Do not open the chuck handle while the handpiece is operating.
- While the handpiece is not in operation, it is recommended to keep the bur in the collet chuck after cleaning up.
- Please check that the unit power is off before plugging in the power cord.
- This unit is made for drilling and grinding work; and is intended for professional use only.
- Type Y attachment > If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

### 2. PARTS & SPECIFICATIONS

#### Components

- |                              |                               |
|------------------------------|-------------------------------|
| ① Control Unit               | ⑦ Overload Lamp               |
| ② Speed Control Knob         | ⑧ Motor Connector             |
| ③ Hand / Foot Selector       | ⑨ Foot Pedal Connector        |
| ④ Forward / Reverse Selector | ⑩ On/Off Foot Pedal Connector |
| ⑤ Power Switch               | ⑪ Power Cord                  |
| ⑥ Pilot Lamp                 | ⑫ Input Voltage Selector      |

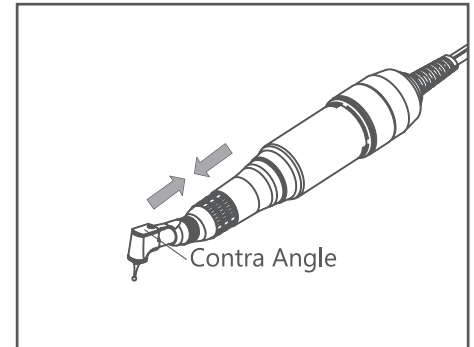
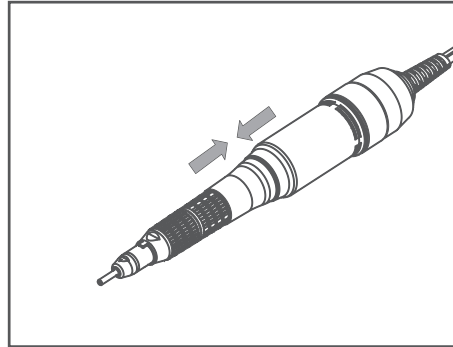
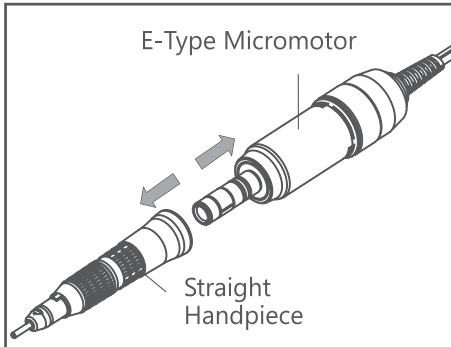


NEW-N7	Input Voltage	Cycle	Output	Weight(g)	Dimension(mm)		
	AC 100-120V or 220-240V	50/60Hz	DC 30V, 1.2A	1,600	115(W)	147(D)	96(H)

### 3. INSTALLATION & OPERATION

#### 3-1 INSTALLATION

- 1) Motor cord plug is required to be well connected into the motor cord connector on the control box.
- 2) Foot pedal switch cord plug is required to be well connected into the foot switch connector on the control box.
- 3) Power cord plug is required to be well connected into the power outlet only after making sure that all cords have been connected properly and safely.
- 4) Handpiece connection (in case of E-type micromotor):



*\* Insert a straight handpiece into E-type micromotor.*

*\* In case of the first use after purchasing a straight handpiece, please run the handpiece under a no load state, then use.*

#### 3-2 OPERATION BY HAND

- 1) Connect the handpiece to a control box.
- 2) Turn on the power switch.
- 3) Turning the speed control knob clockwise will increase the speed of handpiece.
- 4) Switching on the forward reverse selector will change the direction of handpiece.

#### 3-3 OPERATION BY FOOT

- 1) Connect the foot switch to the control box.
- 2) Turn on the power switch.
- 3) To change as the foot mode, switch on the hand/foot selector.
- 4) In the foot mode, a handpiece will be operated within the limit of set speed.

### 4. BUR/BIT INSERTION AND REMOVAL

- 1) To remove a bur, please turn the chuck handle clockwise until it clicks to stop and then pull out the bur/bit.
- 2) To insert a bur, please turn the truck candle counterclockwise until it clicks to stop.
- 3) Please keep the collect chuck and bur clean before reassembling.
- 4) Please be sure NOT to use bent, asymmetrical or damaged burs. Always use standard burs.

### 5. SAFETY PROTECTION SYSTEM: OVERLOAD PROTECTION FUNCTION

- 1) To protect the unit from overheating, a temperature sensor activates by the preset value to shut off the power supply.
- 2) If a control unit gets overloaded, the control unit will be stopped after 5 seconds. Turn off the unit and after 30 seconds, restart.

#### OVERLOAD MESSAGE

The overload lamp turn on and sounds a beeping alarm.

*\*To restart: Turn the speed control knob to MIN after the overload stop.*

## 6. TROUBLESHOOTING

Trouble	Cause	Remedy
Although a control box is fully charged, a handpiece fails to run.	Loose connection of a motor cord with the motor connector of control box.	Correctly plug the motor cord to the motor connector of control box.
	Defect in the motor cord.	Replace the motor cord.
	Worn carbon brushes.	Replace the carbon brushes.
	Trouble in the motor part.	Check the motor and repair if the motor has a problem.
Motor stops suddenly in use.	Overloaded or a chuck is open in operation.	See No.5 Safety protection system. Check the chuck and close the chuck.
Motor fails to run during a foot mode.	Foot switch fails to function.	Set it on "F". Check and replace the foot switch.

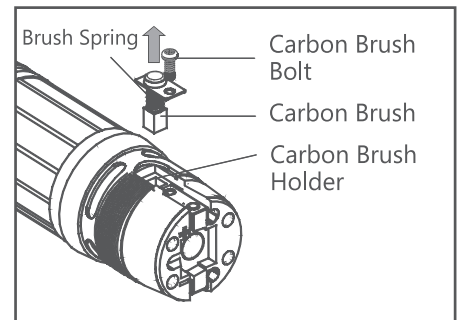
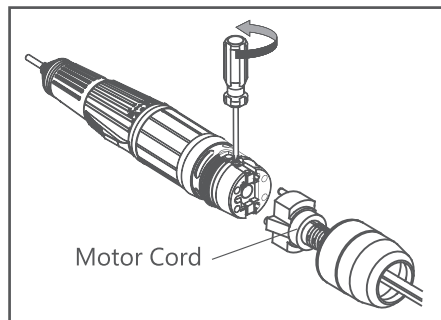
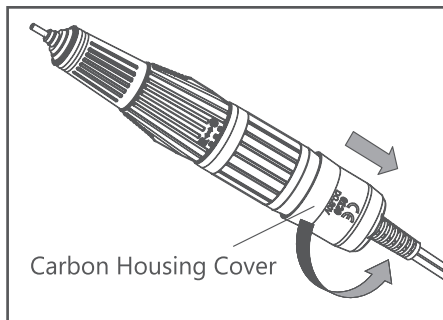
*\*In case of any malfunction, consult with an official dealer*

## 7. MAINTENANCE

### 7-1 REPLACING THE CARBON BRUSHES

- 1) After turning off the power, remove the carbon housing cover of motor cord from the motor.
- 2) Take off carbon brush bolts with a screwdriver (+) and then remove worn out carbon brushes.
- 3) Replace new carbon brushes carefully, a brush spring could get jammed in the carbon brush holder.
- 4) Assemble the handpiece.
- 5) Only use after running the handpiece under a no load state at approximately 20,000 RPM.

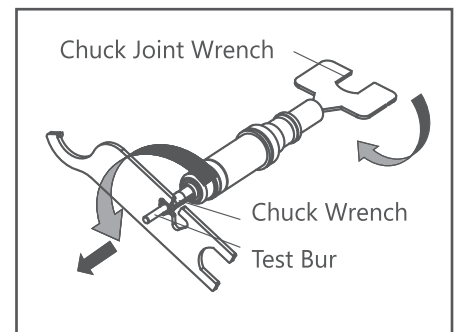
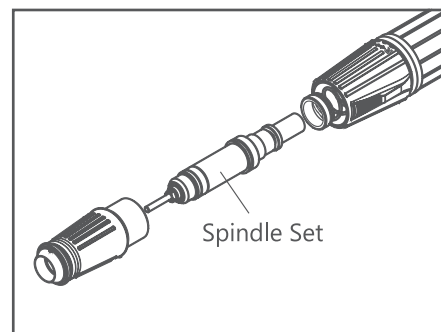
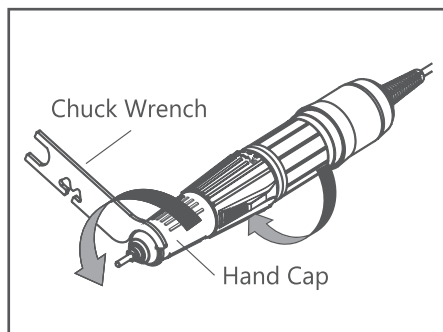
*\* Replacement cycle of carbon brushes will depend on working hours and loading conditions.*



### 7-2 Replacing The Chuck

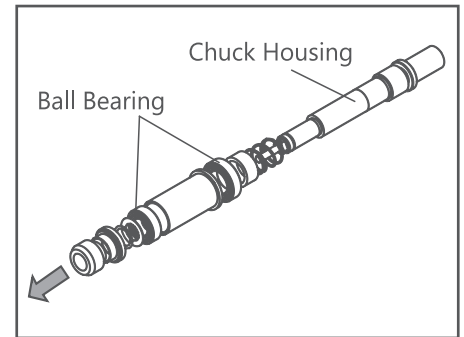
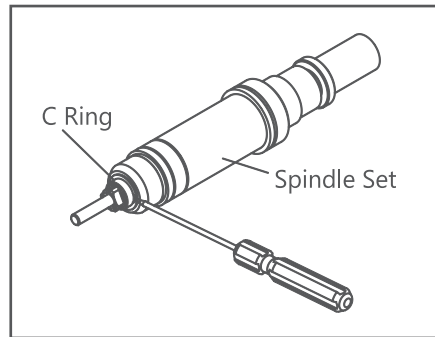
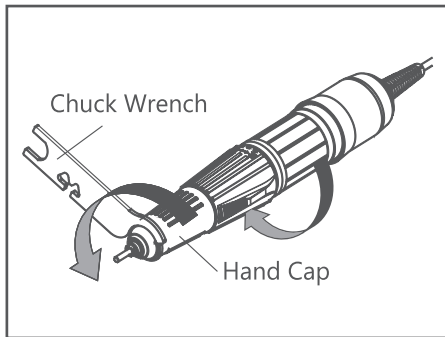
- 1) Disassemble the handcap and spindle assembly by turning the handcap counterclockwise with a chuck wrench.
- 2) Disassemble the collet chuck by turning it counterclockwise with a chuck joint wrench and the chuck wrench.
- 3) Replace the old collet chuck with a new one and then assemble the handpiece.
- 4) Run the handpiece under no load state, confirm proper placement, then use.

*\* Replacement cycle of collet chuck will depend on working hours and loading conditions.*



### 7-3 REPLACING THE BALL BEARING

- 1) Disassemble the handcap and spindle assembly from the front part of the handpiece.
- 2) If C-ring is removed from the front chuck, the housing, ball bearings and other supporting parts will be disassembled.
- 3) Assemble other supporting parts and replace to new ball bearings sequentially; install the C-ring again.
- 4) Assemble the handcap and spindle assembly.
- 5) Run the handpiece under no load state, confirm proper replacement, and then use.

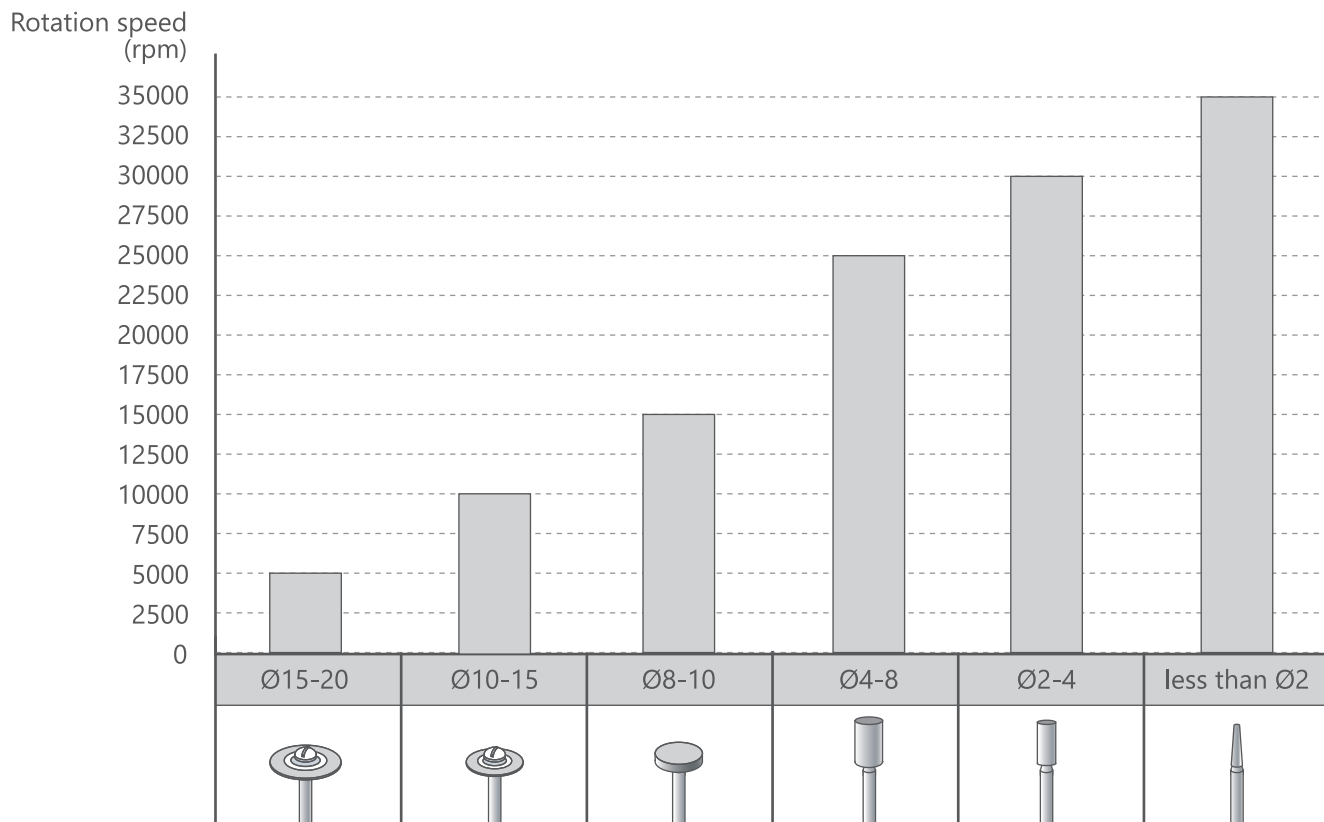


### 8. ALLOWABLE ROTATION SPEED

- \* This chart is a general guide for a maximum speed with conventional burs.
- \* The allowable rotation speed can be a slightly different, depending on bur materials or types.

#### NOTICE

- 1) Make sure not to extend the maximum speed specified by a manufacturer or distributor.
- 2) Large burs, even being operated below maximum speed will vibrate. Speed should be reduced immediately to prevent damage to a bur, the handpiece or the operator.
- 3) Be sure to insert the bur shank all the way until it touches the back of the collet chuck. Tighten collet chuck.  
**Do not use the unit if the bur is not inserted properly.**



### 9. WARRANTY

- \*Quality is not guaranteed in cases of misuse or mishandling.