www.circuitmedic.com
Haverhill, MA 01835 USA
A Circuit Technology Center Company

110-4105-120 / 220 Micro Drill System Instruction: INS1077

This versatile tool is ideal for milling, drilling, grinding, cutting, and sanding circuit boards. Use it to remove coatings, cuts circuits, cuts leads, drills holes, and perform many other procedures using various interchangeable bits.

For detailed instructions covering a range of repair and rework procedures, see www.circuitrework.com/guides/guides.html.

Assembly

1. The Handpiece cord plugs into the lower left socket on the control box.
2. The Foot pedal plugs into the socket on the back of the control box.
3. Plug the power cord into an electrical outlet. Ensure the outlet is properly grounded and compatible with the voltage input requirement. If needed, install or replace the existing power plug.
4. Turn the power switch to the "ON" position.
5. The Forward/Reverse (L/R) DIRECTION switch is located at the bottom right of the Control Box. Normal operation is in R or clockwise direction.
6. The Handpiece is now ready for operation. The speed of the motor is set with the control knob by turning it clockwise.
   Note: The handpiece should always be on the rubber stand when not in use to avoid dropping or rolling.
7. Depress the foot pedal and gradually turn the speed control knob clockwise until the desired speed is attained.

Handpiece Collet

1. To open/release the collet, turn in a clockwise direction. The collet release is spring-loaded. You will feel the spring get harder to turn as you twist, and then a click or snap will be felt as the chuck release opens. Turn counterclockwise to close/secure.
   Note: Collets are available in either 3/32", and 3mm or 1/8".
2. It is normal for the handpiece to warm up slightly on continued use. Do not expose to water or use in wet locations.

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Changing Handpiece Collet

1. Turn the set ring clockwise to open the chuck.
2. Using the chuck wrench tool included with the handpiece, place the triangle section of the wrench over the top of the chuck, turning counterclockwise until the chuck is completely unscrewed and is loosened from the spindle.
3. Insert a different size chuck or replacement chuck. Use the chuck wrench tool with the triangle section over the top of the chuck and turn the wrench tool clockwise until the chuck is completely tightened.
4. If final adjustment of the chuck is needed, turn the wrench tool approximately 1/4 turn counterclockwise to loosen the chuck.

Suggested Maintenance

1. Carbon brushes in the handpiece motor are designed for long life, approximately 1,000 hours. Carbon brushes should be replaced periodically, approximately once each year.
2. Wipe the handpiece only with isopropyl alcohol and avoid getting wet.

Precautions

1. When using electric tools, use basic safety precautions in order to reduce the risk of fire, electric shock, and personal injury.
2. Do not expose electric tools to water or use them in damp or wet locations.
3. Do not wear loose clothing or jewelry, as they can be caught in the drill.
4. Do not attempt to service or repair the handpiece, control box, or foot pedal. Repair should be referred to the manufacturer, dealer, or authorized service center.
5. Do not oil, lubricate or grease the handpiece.
6. Do not switch forward to reverse direction until the motor has completely stopped.
7. When the unit is not in use, the power switch should be turned off.
8. Do not run the handpiece without a bur or drill properly locked in place.