

Maintenance

The H.MH-110 has permanently lubricated ball bearings that do not require lubrication. Putting even a small amount of oil into the handpiece can damage it.

Cleaning Handpiece: Use the Handpiece in as clean and dust free an environment as possible. A cloth with a small amount of alcohol solution can be used to clean outside of handpiece if necessary.

Do not use any other cleaning fluids or immerse handpiece in any liquid.

Checking/Changing Motor Brushes: A spare set of motor brushes (HP4-163) is supplied with each handpiece. Depending on how long the handpiece is used each day, the brushes should be checked for wear periodically (about every 200 hours of use) and replaced when the brush is less than 2mm (5/64”) long.

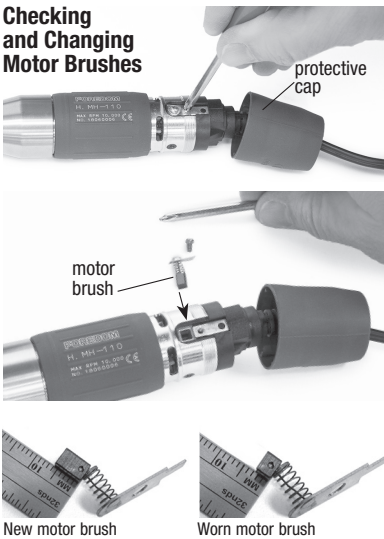
- To Check/Replace Motor Brushes:**
1. Unscrew protective cap from rear of motor by turning it counterclockwise while gripping handpiece body.
 2. With small Phillips head screwdriver remove screws and brush assemblies one at a time. Check length of carbon brush from spring to curved side of brush.

Remove and examine each motor brush. If one motor brush shows wear — replace both of them. If the motor brush is long enough to continue using be sure that when you reinsert a motor brush the curve aligns with the contour of the outside of the housing and the curve of the motor armature within.

3. Re-insert brush assembly or new brush assembly into brush tube. Replace and tighten screws.
4. Screw protective cap back onto rear of motor housing so that top of brush assembly is completely covered.

Available Separately
**AK101
6pc. Anvil Point Kit**

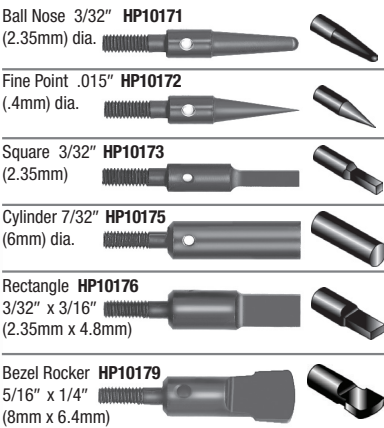
Includes each of the threaded anvil points shown above: Ball Nose, Fine Point, Square, Cylinder, Rectangle, Bezel Rocker, and pin for installing packed in a plastic bur holder with cover.



When you reinsert a motor brush the curve should align with the handpiece contour

Threaded Anvil Points for Hammer Handpieces Available Separately

These six threaded anvil points fit Foredom Flex Shaft Hammer Handpieces, Foredom Micromotor Hammer Handpiece and the Swiss made Badeco Hammer Handpiece. They are heat treated steel made to the finest specifications and finished with black oxide. Made in USA.



Replacement Parts

Motor Brush (pair)	HP4-163
Fuse	HP4-110

Limited Warranty

Warranty period is 2 years for K.1080 Micromotor Hammer Kit. Blackstone Industries, LLC d/b/a Foredom Electric Company warrants, to the original purchaser only, that its products will be free from defects in material or workmanship for the applicable period of time indicated above following the purchase date. During the warranty period, the defective product will be repaired or replaced without charge or, at our sole option, the purchase price will be refunded. This warranty does not cover damage caused in transit or by accident, misuse or ordinary wear. ALL IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, ARE LIMITED IN DURATION TO THE APPLICABLE WARRANTY PERIOD. IN NO EVENT WILL WE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. At our sole option, repair, replacement or refund will be made. **Please call 1-800-272-288, or email customerservice@blackstoneind.com for further instructions.** All warranty repairs must be done at our factory at the above address. We will not pay any shipping or transportation charges. Armatures, bearings, shafts, sheaths and duplex springs are not covered by this warranty. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Return Instructions

Please call 1-800-272-2885 or email customerservice@blackstoneind.com to request a RMA number (Return Material Authorization Number) and instructions prior to returning.

Repair Services

Please call 1-800-272-288, email customerservice@blackstoneind.com or visit <https://www.foredom.net/warranty-repairs/> to learn more about our flat rate repair service and how to arrange for a repair.

Please retain your proof of purchase for warranty.

FOREDOM®
Foredom Electric Company
CT USA
www.foredom.net
203-792-8622
customerservice@blackstoneind.com

FOREDOM®

Operation and Maintenance Manual for K.1080 Micromotor Hammer Kit



For Your Safety:



Read this Manual before operating your Foredom Micromotor Power Tool.



Always wear eye protection while using the Foredom Micromotor Handpiece.

www.foredom.net

Safety Instructions

This Micromotor Handpiece is a high speed reciprocating power tool which can be dangerous and cause serious injury if it is not used properly.

- **ALWAYS** wear proper eye and face protection. Wear safety glasses or a face shield whenever you operate any power tool to prevent serious eye injury.
- **ALWAYS** observe the manufacturer's maximum speed rating when using any accessory.
- **NEVER** use or continue to use any accessory which appears to be damaged, loose, vibrating, bent, or out of balance. Inspect each accessory for cracks or flaws before use.
- **ALWAYS** insert the shank or arbor of an accessory or mandrel into the chuck of the handpiece as far as possible in order to provide proper support and close the chuck securely. **DO NOT** use rotary accessories with shanks that are less than 3/8" long.
- **NEVER** submerge the handpiece in liquids.
- **NEVER** use excessive side pressures which may tend to bend or break the shank or arbor of an accessory. Let the speed of the accessory do the work.
- **DO NOT** stall the motor by jamming or using excessive pressure on the mounted point, buff, wheel or accessory. This can result in damage to the motor.

- **WEAR** a dust protector to prevent the inhalation of harmful dust or debris from grinding, carving or other operations performed with this power tool.

- **DO NOT** cover the ventilation slots or handpiece motor with cloth or tape. Air must pass freely through the intake and exhaust ventilation slots to properly cool the motor.

- If the power cord or plug to the handpiece is damaged, repair or replace immediately. **NEVER** operate with a damaged power cord.

- **USE** a dust collector (vacuum system) to pull sawdust, grinding dust, or other debris away from the work area and the control box and handpiece intake vents.

- **NEVER** plug the Handpiece into the Variable Speed Foot Control Connection Port on the back of the Control Box.



- **ALWAYS** plug the Handpiece into the Handpiece Connection Port on the Front of the Control Box.
- **DO NOT** operate the handpiece in the presence of any flammable liquid or gas.
- **Secure the workpiece** that you are carving in a vise or other work holding device. Holding it with your hand is dangerous and can result in serious hand injury. **Keep both hands and fingers away from the cutting edge at all times.**
- **Never** wear open shoes or sandals. Use footwear that is tough enough to protect your feet from falling tools.
- **Do not** wear loose fitting clothing or jewelry which can become entangled in the tool. Do not wear items such as neckties, necklaces, or bracelets when operating power tools. Secure or tie back long hair.
- **Avoid** knots, imperfections in the wood or metal objects like nails, which could catch or damage the tool bit. Let the speed of the tool do the work.

Assembly Instructions

Do not plug into a power outlet before connecting the handpiece or foot pedal. Check to see that the voltage selector switch on the back of the control box is set to the correct voltage to be used: 110 or 220 volt.

Figure 2 Rear Panel

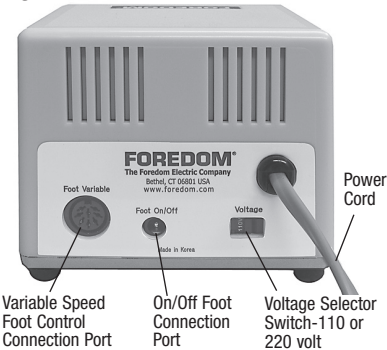
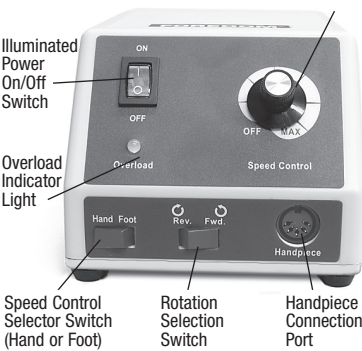


Figure 1 Front Panel



Connecting Handpiece

With the Power Switch in the "Off" position and the Rotation Selection Switch in the "Forward" position, attach the micromotor handpiece to the control box by plugging the coiled cord into the Handpiece Connection Port on the lower right side of the front control panel (Figure 1). Use keyway for proper alignment when plugging in the cord. **NEVER plug the handpiece into the Variable Speed Foot Control Connection Port on Back of Control Box.**

Always use the H.MH-110 handpiece in the forward (Fwd)direction. Never use in reverse!

Connecting Power Cord: Put the On/Off Switch in the "OFF" position and turn the dial speed control to the "OFF" speed position. Put the Rotation Selection Button in the Forward Position. Operating the handpiece with the switch in the reverse position can severely damage the handpiece. Now plug in the power cord to an AC current outlet.

Connecting the Variable Speed Foot Control

The Variable Speed Foot Control is suitable for either 110 or 220 volt operation. Attach it by inserting the connector into the Variable Speed Foot Control connection port on the rear panel of the control (Figure 2) using keyway for proper alignment. It is not necessary to have the foot pedal connected to the control box to operate the dial speed control. The Micromotor control and handpiece are now ready to operate.



Connecting Optional On/Off Foot Switch

This switch (p/n HP4-927) is available separately and attaches by inserting the connector into the On/Off foot connection port on the rear panel of the control (Figure 2) using keyway for proper alignment. This switch allows you to turn the motor on and off without changing the speed set by the dial.



Operating Instructions for HP4-917 Control Box

1. Power On/Off Switch

When the Power On/Off Switch is in the ON position the switch lever will light up. **This switch must be in the ON position for the handpiece to run with either the dial speed control or the foot speed control selected.**

Always turn the Dial and Power On/Off Switch to the Off position when not in use.

2. Hand or Foot Selector Switch

With the Dial and Power On/Off Switch in the OFF position, select either foot or hand speed control.

- With the Speed Control Selector Switch in the Hand position, the handpiece will run at the speed set by the Dial Speed Control.
- With the Speed Control Selector Switch in the Foot position, the handpiece will not operate until the Foot Pedal is depressed.

If dial is not set at full speed foot pedal will only run at the speed set by the dial control.

3. Always use the H.MH-110 handpiece in the forward (Fwd) direction. Never use in reverse!

Forward/Reverse Rotation Selection Switch

This switch is for use with rotary handpieces **ONLY**.

If you are using a rotary handpiece, with the Power On/Off Switch in OFF position, select the desired handpiece rotation by moving the switch to Fwd. for FORWARD or Rev. for REVERSE rotation. **Changing handpiece rotation direction while in operation is not recommended.**

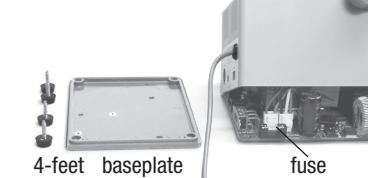
4. Regulating Speed

- The Dial Speed Control varies the speed of the handpiece from minimum to a **maximum 2,500 strokes per minute** when the Speed Control Selector Switch is in the Hand position.
- The Dial also controls the speed that can be reached when using an on/off or variable foot pedal.

5. Handpiece Overload Protection

The red overload light will come on with an audible alarm, and the handpiece will stop when too much load is placed on the handpiece. Immediately turn off control by putting the Power ON/OFF switch in OFF position. Put power switch in ON position again when overload condition is corrected. There may be a time delay of several seconds before the overload trip resets.

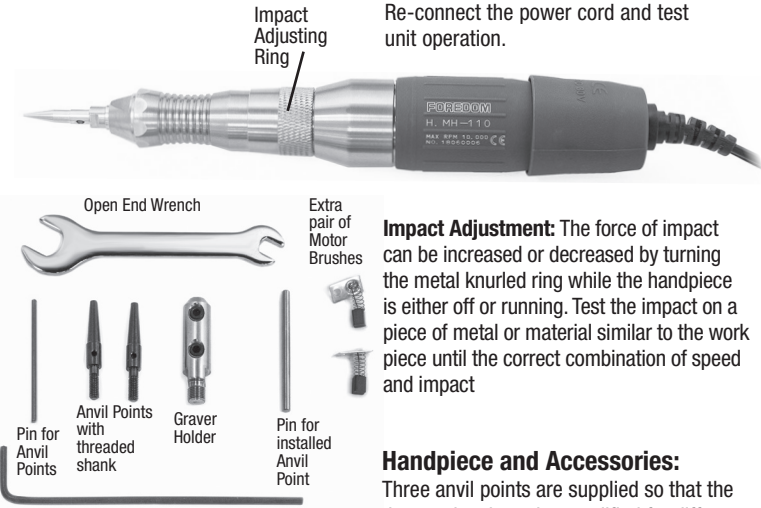
Figure 3



6. Fuse Protection

The internal circuit is protected by a 3.15 Amp, 5mm x 20mm, Bussman Type GDC-3.15A or equivalent fuse. A blown fuse usually indicates a short condition on the circuit board. A blown fuse is a very strong indication that the circuit board should be checked by a qualified technician. Freedom offers repair services at our factory. Contact information is shown at the back of this manual.

To replace the fuse, disconnect the power cord, unscrew the four feet and remove the baseplate. The fuse is located in the top left corner of the circuit board. Replace fuse and reassemble the baseplate with four feet. Re-connect the power cord and test unit operation.



Impact Adjustment: The force of impact can be increased or decreased by turning the metal knurled ring while the handpiece is either off or running. Test the impact on a piece of metal or material similar to the work piece until the correct combination of speed and impact

Handpiece and Accessories:

Three anvil points are supplied so that the tips can be shaped or modified for different setting operations. To use the anvil points, thread in the anvil point adapter and tighten with wrench. Thread an anvil point in to it and tighten it with a pin in its cross hole. The HPH8-214 Graver Holder screws into the front end of the handpiece and converts it into a power engraving tool. It comes with a 5/64" hex key.

Attaching Handpiece Accessories:

This Hammer Handpiece comes with the following accessories and adapters:

- Anvil Point (installed) and wider pin
- Two HP10177 Anvil Points with Threaded Shanks
- HPH8-214 Graver Holder & Hex Key
- Open End Wrench (5mm)
- HP10562 Narrow Pin, to tighten Anvil Points