FOREDOM®

Owner's Manual

for the

Bench Lathe

M.BL (115v)

M.BL-2CE (230v)

For Your Own Safety–

Read Owner's Manual before operating your Foredom Power Tool.

Always wear eye protection while using the Bench Lathe or other power tools.

You have purchased a fine quality power tool which will perform a wide variety of tasks difficult to do with any other kind of power tool. Foredom® Power Tools are manufactured to high standards of precision and performance and, with proper use and maintenance, will give you years of trouble-free performance.

Safety Instructions

Before using your Foredom Bench Lathe, ***please read all safety instructions.*** They are for your protection and should always be followed to reduce the risk of personal injury or damage to the tool.

Always wear proper eye and face protection. Safety glasses or face shields should be worn whenever you operate a Foredom or any power tool to prevent serious eye or face injuries. **Do not** wear loose clothing or jewelry and be sure to **tie back long hair**.

Always use a proper dust collection system or wear a respirator to prevent the inhalation of dust particles or other debris into your lungs.

Never operate any accessory at speeds above its maximum speed rating. When properly used, all of Foredom's accessories can be operated at the speeds listed in Foredom accessory catalogs or on the packaging. Only accessories rated for 7,000 RPM or more should be used with the Bench Lathe. **Always** determine the manufacturer's speed rating before using accessories other than Foredom's.

Never use or continue to use any accessory which appears to be damaged, loose, vibrating, or out of balance. Inspect each accessory for cracks or flaws before using it.

Always insert the shank or arbor of an accessory or mandrel into the collet (or collet holder chuck or chuck arbor) as far as possible in order to provide proper support. Tighten the collet or chuck securely.

Always make sure that accessory tightening tools such as the pin and wrench are **removed** before the lathe is turned on.

Never use excessive side pressures which may tend to bend or break the shank or arbor or an accessory. Let the speed of the accessory do the work.

Do not overload the lathe by jamming or using excessive pressure on the polishing wheel, buff wheel, or accessory. Do not apply long time continuous loading. This can result in damage to the lathe.

Never operate your power tool during a perceptible power decrease. Turn power tool off and do not use until power is fully restored.

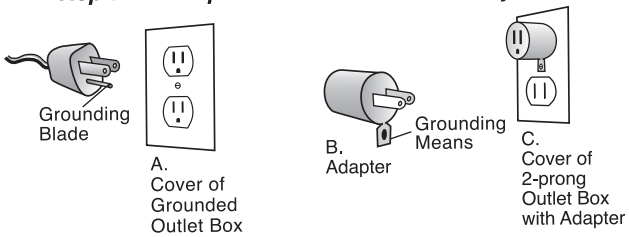
Use proper fusing procedures. The fuse holder is located on the rear of the base. If a fuse blows, make sure lathe is not being overloaded, line voltage is not low, and motor shaft turns freely. Replace fuse with same type and ampere rating. Use type 3AG "slow blow" fuses, 3 Amp for model BL, 1.5 Amp for model BL-2. **Do not use a higher ampere fuse.**

Use proper grounding procedures. This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. If your unit is for use on less than 150 volts, it has a plug that looks like sketch A in Figure 1. An adapter (sketches B and C) can be used for connecting plugs as shown in sketch A to 2-prong receptacles. The green colored rigid ear, lug, etc., extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. **Some jurisdictions, including Canada, prohibit the use of 3 to 2 prong adapters. Where prohibited, they should not be used.** Use only 3-wire

extension cords that have 3-prong grounding type plugs and 3-pole type plugs and 3-pole receptacles that accept the tool's plug. Always disconnect the power cord before servicing the lathe. Never use in an area where flammable vapors are present.

Replace or repair worn cord immediately.

Figure 1



Assembly Instructions

BL Bench Lathes have 5/16" (8mm) straight motor shafts and come with A-TM5 (left hand) and A-TM6 (right hand) tapered spindles. These precision made spindles are suitable for speeds of 500 to 7,000 RPM. Similar accessories, supplied for slower speed polishing motors, often do not run as true which can cause vibration and be a potential hazard. **Using spindles and other precision accessories supplied for slower speed motors is not recommended with this bench lathe.**

Mounting Base: The Bench Lathe comes with suction cup feet that help to secure the lathe to a smooth work surface. To further prevent movement while pressure is being applied to a buff or wheel, the base should be bolted or screwed down to a solid work bench or table. Use the four mounting holes in the base for this purpose.

Attaching Accessories: The supplied A-TM6 tapered spindle, and optional A-CHA-5 collet holder, A-JCA-2 chuck arbor, A-WM6 wheel mandrel and S.BO flexades® are **right hand side** accessories, intended for use on the right hand side of the lathe as you face it. **Do not use them on the left side** as buff, wheel or tool may unscrew under load. The supplied A-TM5 tapered spindle is intended **for use on the left side only**. An optional A-WM-5 wheel mandrel is available for use on the left side of the lathe. (Every spindle and mandrel is marked with an R or L to indicate left or right hand.)

Attach the spindles or mandrels by sliding them onto the motor shaft until there is only a 1/8″ space between the motor housing and inside edge of the spindle or mandrel. Be sure that the two set screws line up with the flat on the motor shaft.
Tighten both screws securely with supplied hex key.

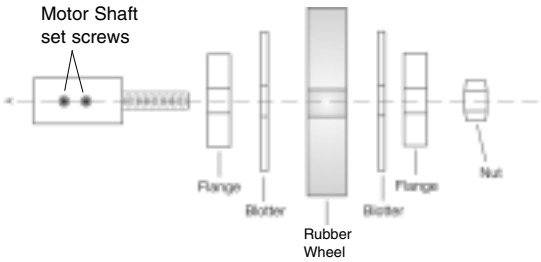
See Figure 2 for mounting rubber wheels or other accessories with 1/4″ diameter center holes on A-WM-6 wheel mandrel.

Use only 115 Volt AC 60 Hz for BL and use only 230 Volt AC 50 Hz for a BL-2. Run the lathe at slow speed without a buff (or wheel) to see that the spindles, mandrel, or collet holder on the lathe are running true.

Never use a buff, brush, abrasive wheel, or any other accessory that is not rated for at least 7,000 RPM and never use one that appears to wobble or vibrate. It could damage the lathe or injure you. **Buffs over 4″ in diameter should not be used on the Bench Lathe. Never use a grinding wheel over 2″ diameter nor rubber bonded wheels over 3″ in diameter.** Please refer to Figure 2 for the proper mounting procedure for wheels or brushes on the A-WM-6 (or A-WM-5) mandrel.

Figure 2
A-WM-6 Assemble all components in proper sequence.

(A-WM-5 left side wheel mandrel has same components in opposite sequence)



Operation

Because of the higher maximum speed (approximately 7,000 RPM) and variable speed control, the Foredom® Bench Lathe has several advantages over conventional single or two speed polishing and buffing lathes:

1. The same size buffing wheel can be used to obtain different surface speeds, as measured in surface feet per minute (SFPM). 3″ or 4″ diameter buffs can provide the 1,750 to 3,450 SFPM recommended for polishing and the 3,450 and higher SFPM recommended for buffing. The chart below shows the SFPM obtained with different diameter wheels at various speeds.
2. The SFPM can be varied while using the same diameter buff or wheel. This will give better results on different types of material.
3. The 7,000 RPM maximum speed will enable you to get much higher SFPM with smaller 1″ or 2″ buffs or inside ring buffs, than slower single or double speed equipment.
4. The new 3M Scotch-brite™ Radial Bristle Discs in 2″ and 3″ diameters also require 5,000 or higher RPM for optimum performance.
5. The maximum speed of 7,000 RPM is also fast enough to permit the use of small mounted abrasive points, brushes, cutters, or other accessories in the A-CHA-5 collet holder, S.BO-516 flexade or A-JCA-2 chuck holder.

For additional information on buffing and polishing procedure, wheel selection, and Foredom buffing and polishing compounds, please refer to the Foredom Buffing and Polishing Guide (Form No. 1234).

SPEED		SFPM
1″ Dia. Buff		
Full	7,000 RPM	1,750
Med	4,000 RPM	1,000
2″ Dia. Buff		
Full	7,000 RPM	3,500
Med	4,000 RPM	2,000

SPEED		SFPM
3″ Dia. Buff		
Full	7,000 RPM	5,250
Med	4,000 RPM	3,000
4″ Dia. Buff		
Full	7,000 RPM	7,000
Med	4,000 RPM	4,000

Cotton, chamois or felt buffs over 4″ in diameter should not be used with the Bench Lathe.

Bench Lathe Attachments

Tapered Spindles

A-TM5 Left Hand **A-TM6 Right Hand**

Precision, true running tapered spindles suitable for speeds up to 7,000 RPM. Fits 5/16″ (8mm) diameter straight motor shafts. Double locking screws. Suitable for use with cotton, felt, and chamois buffs with shellac-hardened leather, or lead centers. Also used with felt inside ring buffs on wooden mandrels. **Use A-TM5 on left side (as you face it) and A-TM6 on right side of bench lathe.**

Tapered Spindle Adapters

for Scotch-Brite™ Radial Bristle Discs

Part No.	Side of Lathe	Arbor Hole Diameter
A-4561	Right hand	3/8″
A-4562	Left hand	3/8″

FX Wheel Adapter for 3M™ FX Polishing Wheels

A-4568	Both	1″

A-JCA-2 Chuck Arbor

Arbor for 5/16″ diameter motor shafts adjusts to hold accessories from 0– 5/32″ (3.9mm). Comes with key in molded plastic handle.
Use on right side only.

Wheel Mandrels

A-WM-5 Left Hand **A-WM-6 Right Hand**

Mandrels to hold rubber bonded abrasive wheels, sanding drums, brushes, and other accessories with 1/4″ mounting holes and rated for maximum speeds of 7,000 RPM or higher. Fits 5/16″ (8mm) diameter straight motor shafts.

A-CHA-5 Collet Holder

Collet holder on arbor for 5/16″ diameter motor shafts. Comes with 3/32″, 1/8″, and 1/4″ collet, pin and wrench. For use with all 440 series collets in 1/16″ to 1/4″ and metric sizes. **Use on right side only.**

440 Series collets

P/N	Nominal cap.
HP441	1/16″
HP442	3/32″ (2.3mm)
HP443	1/8″
HP444	5/32″
HP445	3/16″
HP447	1/4″
HP448	3mm
HP449	6mm

S.BO-516N Flexade®

Comes with 5/16″ (8mm) coupling and extra flexible 30″ long neoprene sheath allows you to use any of Foredom's interchangeable handpieces. **Must be attached to the right side of the lathe. Handpiece not included.**

MADCH-1 Dust Collector Hoods

Heavy gauge sheet metal construction with non-skid pads on the bottom. 2½″ (64mm) adapter fits most dust collection system hoses.

Height: 6½″ (165mm)
Width: 4⅝″ (117mm)
Depth: 8⅝″ (219mm) deep

If this manual has been downloaded or received as a replacement to go with an older model (made prior to 2003), the attachments shown in this manual will not fit. Older bench lathes require attachments that will fit 1/4″ (6.35mm) straight motor shafts. Contact your Foredom dealer or Foredom for bench lathe attachments.

Maintenance

Lubrication: The Foredom Bench Lathe has pre-lubricated ball bearings and a dust-proof motor housing and does not require any lubrication. The motor is designed to operate above room temperature which will be warm to the touch but will not harm the motor.

Brush Wear: Disconnect power cord before checking for brush wear. Check for brush wear periodically (about every 200 hours of continuous operation). Unscrew the brush tube caps, check the brush length, and install new brushes if the old ones are less then 3/16″ (4.7mm) in overall length. Be sure that the radius in the end of the brush is in line and conforms to the commutator surface. Replacement brushes (MP262P) are available from your dealer, the factory, or you may order them online from **www.foredom.com**.

Repair Service

Factory repairs are done promptly and at reasonable cost. If you wish, you can send your equipment directly to the factory marked Attention: Repair Dept. Be sure to give your street address and telephone number. The equipment should be accompanied by a brief note describing the problem. Estimates will be made upon request.

Owner's Registration Card

Send your Owner's Registration Card to Foredom right away. We will keep your card in our Owner's Registration File.

LIMITED WARRANTY

The Foredom Electric Co. warrants the Bench Lathe to be free of defects in material or workmanship for a period of 1 year after purchase. During the warranty period, the defective product will be repaired or replaced without charge or, at our 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 BUT NOT LIMITED TO WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE HEREBY LIMITED IN DURATION TO A PERIOD ENDING ONE YEAR FROM DATE OF PURCHASE, AND WE WILL NOT BE LIABLE OR RESPONSIBLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.
Repair or replacement will be made at our option if the product is returned post-paid to:

The Foredom Electric Company
16 Stony Hill Road
Bethel, CT 06801 USA

All warranty repairs must be done at the factory at the above address. We will not pay any shipping or transportation charges. This warranty only covers the original purchaser of the product. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

FOREDOM®
The Foredom Electric Company
Bethel, CT USA 06801
www.foredom.com

Form 1248 3/08 n

Printed in USA