

Mast R Lift™ II

User Manual for Incra Mast-R-Lift II

Model #02120



Thank you for choosing this product from JessEm Tool Company. We appreciate your support and hope that our product serves you well. This product is designed to provide many years of reliable service provided it is used as intended and taken care of.

This user manual will assist you in assembly and general operation of this product. It is not our intent to teach you about woodworking. It is assumed that you are an experienced woodworker with the basic skills and experience necessary to use this product safely. If after reading the following instructions, if you are unsure or uncomfortable about safely using this product we urge you to seek additional information through widely available woodworking books or classes.

Suggested Router Bit Speeds

Bit Diameter	Max. Speed
1" (25mm)	24,000 RPM
1-1/4" - 2" (30-50mm)	18,000 RPM
2-1/4" - 2-1/2" (55-65mm)	16,000 RPM
3" - 3-1/2" (75-90mm)	12,000 RPM

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IMPORTANT!

Read and understand the contents of this manual before assembly or operation of this product.

As part of our Continuous Product Improvement Policy, JessEm products are always advancing in design and function. Therefore there may be differences between what is shown in our catalogs, website or at retail display and what is sold at time of purchase. We reserve the right to make positive changes to our products at our discretion.

CONTENTS:

- 1 - Mast-R-Lift™ II
 - 1 - Height Adjustment Handle
 - 10 - 1/4-28 x 1/4" Leveling Set Screws
 - 1 - Start Pin
 - 1 - 3/16" hex key
- Also includes:
- 5 - Magna Lock Insert Rings
 - 1 - 3/32" Hex Key
 - 1 - 1/8" Hex Key
 - 1 - 5/32" Hex Key
 - 1 - 1/4-20 x 1/4" Cam Screw

IMPORTANT SAFETY PRECAUTIONS

- Before operating any router, read and understand all safety instructions in the owner's manual that came with the router.
- If you do not have a manual, contact the manufacturer and obtain one before using any power tool.
- Always wear eye protection in compliance with ANSI safety standards when operating any power tool.
- Always use proper guards and safety devices when operating power tools and machinery.
- Carefully check router bits before each use. Do not use if damage or defect is suspected.
- Do not exceed the recommended RPM for any router bit.
- Do not wear loose clothing or jewelry that may catch on tools or equipment.
- Unplug the tool or machine when mounting or making any adjustments to mechanical performance.

DO NOT USE A CORDLESS DRILL TO RAISE AND LOWER THE LIFT CARRIAGE. THE AMOUNT OF FRICTION WILL CAUSE PREMATURE WEAR OF THE THREADS AND WILL VOID WARRANTY

ROUTER SAFETY PRECAUTIONS

- Never force the bit or overload the router beyond the expectations of the tool.
- Be sure that at least 3/4 of the shank length is inserted securely in the router collet.
- Never bottom out the bit in the collet. Allow 1/8" clearance between shank and bottom of collet.
- Always make sure the fence on your router table is locked into position before each use.
- Always rout in two or more passes when large amounts of stock must be removed.
- Use reduced RPM speeds for large diameter bits.

INSTALLING THE ROUTER

Place the crank handle into the hex hole in the lift's dial on the top plate. Crank the lift carriage up so that it just contacts the O-rings at the top of the carriage shafts. The carriage should be all the way toward the top plate.



Figure 1

Before installing the router motor, prop the unit up on blocks of wood (Fig. 1) so the router's collet can extend through the center hole in the top plate. The motor housing must be able to slide all the way through and contact the inside back of the center hole on the plate.

1. With a 1/8" hex key, remove one of the 1/4" shoulder bolts from one of the clamping blocks and slide the clamping block on the carriage (Figure 2)

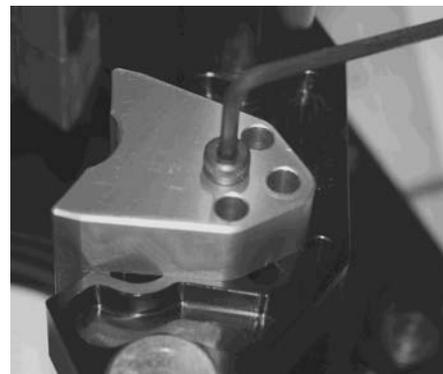


Figure 2

2. Locate your router on the chart below.
3. Align the letter and number associated with your router (Figures 3 and Figure 4) and reinsert and tighten the $\frac{1}{4}$ - x 1-1/2" Shoulder Bolt you removed in step 2.
4. Repeat this for all four carriage clamping blocks

ROUTER CHART

Porter Cable 7518	A1
Porter Cable 690/890, Bosch 1617/1618, DeWalt 610/616/618, Craftsman 17543/17540/28190	F4
Makita 1101	C1
Hitachi M12VC/KM12VC	E2
Milwaukee 5626	D3
Milwaukee 5615/5616/5619	G3
Rigid R29302	B1

Carriage

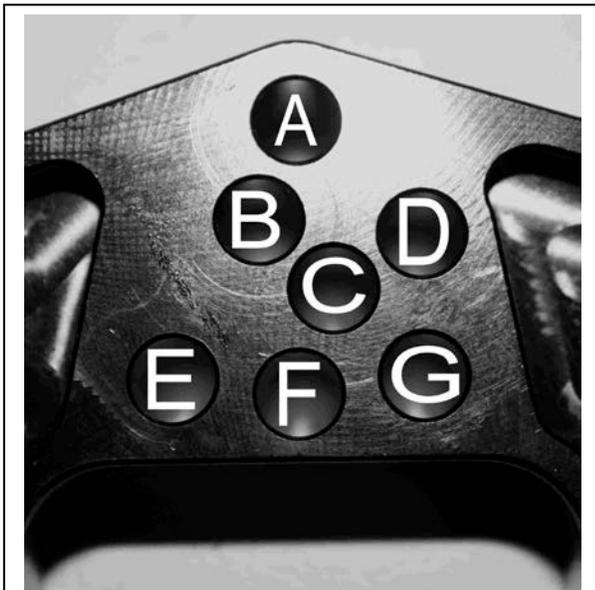


Figure 3

Clamping Block

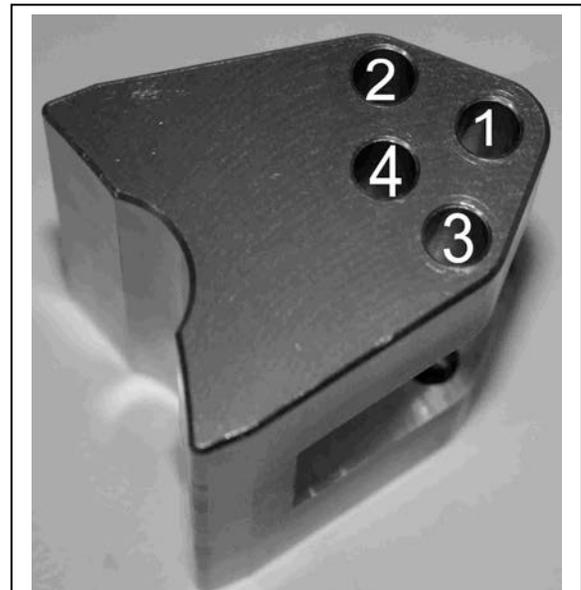


Figure 4

5. With the Mast-R-Lift II Crank Handle loosen the tensioning cap screw sufficiently to force the carriage to spread (Figure 5). This allows the router to be installed easily.

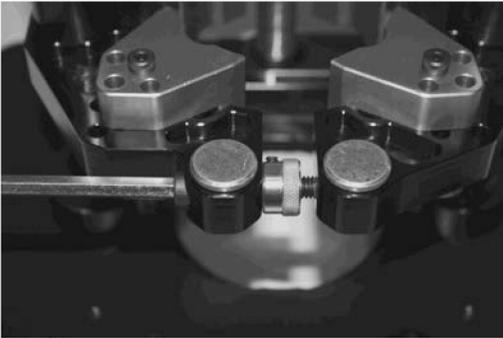


Figure 5

6. Now slide the router motor into the carriage so the top of the motor housing just makes contact with the inside surface of the center hole in the top plate (Figure 6)



Figure 6

7. Rotate the router so that when the final installation is made all router controls will be positioned for convenient access and there is no interference. Then back the motor off approx. $1/16$ " from contacting the top plate and tighten the cap screw on the carriage assembly.



Figure 7

8. With the Mast-R-Lift™ II Crank handle, re-tighten the tensioning cap screw. (Figure 7)

INSTALLING A JESSEM LIFT IN A CUSTOM ROUTER TABLE APPLICATION

A JessEm router lift is similar to using a router mounting plate. Your table top must have a port machined into the top. JessEm offers solid phenolic router tables tops with pre-machined ports for all JessEm router lifts. If you are installing this Lift in a custom table application you will have to fabricate this opening yourself. JessEm offers a separate template for this operation. See your JessEm distributor for the proper template for your JessEm Mast-R-Lift II.



Figure 8

LEVELING THE LIFT IN THE TABLE TOP

1. With the Mast-R-Lift™ II in the table top opening, install (10) set screws into the holes around the lift perimeter. Adjust (Figure 8) the four corners first to align the lift surface to the table surface so that both are flush. Adjust the remaining set screws on the sides to provide added support.

Note: If installing in an INCRA router table, do not use the set screws. Instead, use the threaded holes for access to the pre-installed plate leveler screws built into the router table.

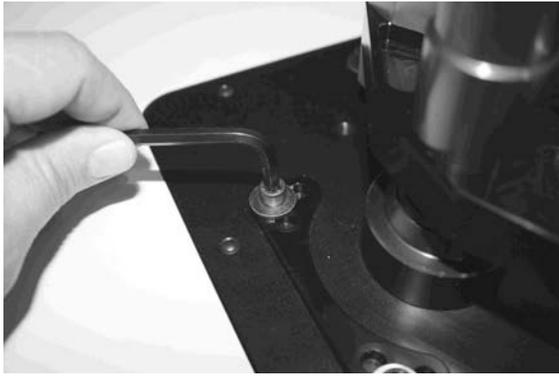


Figure 9

ADJUSTING THE FIT IN THE TABLE PORT

Your Mast-R-Lift™ II comes with adjustable snigger bars to allow for a tight fit in the table top opening and eliminate any movement of the plate. Use the 3/16" hex key provided to loosen the cap screws on the snigger bars. Move the bars out slightly and check for fit. Adjust again if necessary. (Figure 9) The INCRA Special Edition model also includes the top mounted CamLOCK plate locking system. See included addendum for instructions.

TAB-LOC PHENOLIC INSERT RINGS

Note: The INCRA Special Edition Mast-R-Lift™ II incorporates INCRA's 5 Piece MagnaLOCK Ring Insert System in place of the Tab-Loc Rings described below. See included addendum for instructions. Your Mast-R-Lift™ II comes with one 2" insert ring with a pre-drilled center hole. Additional ring sets are available with different diameter pre-drilled holes and/or no pre-drilled holes for creating your own custom center hole diameters. See your JessEm distributor for these and other accessories.



Figure 10

1. Place the insert ring into the center hole of the Lift's top plate (Fig. 5).
2. With the insert wrench provided, insert the prongs of the wrench into the corresponding holes in the insert ring and turn the insert ring counter clockwise to tighten.

Turn the insert wrench clockwise to loosen and remove the ring. If the insert ring becomes too tight to loosen with hand pressure, a tap clockwise on the insert wrench with a block of wood will loosen it.

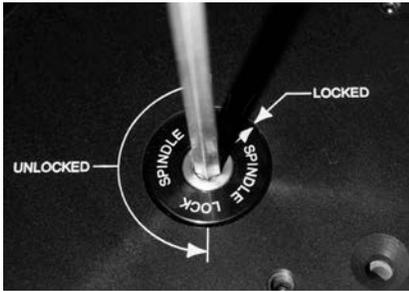
USING YOUR MAST-R-LIFT™ II

To raise your router, turn the height adjustment handle clockwise. To lower, turn the handle counter-clockwise. Keep in mind that one complete revolution equals 1/16" of change. When your adjustment is complete, remove the handle and place somewhere off the work surface for safety. Refer to the chart below for fractional and decimal adjustments based on amount of revolutions made.

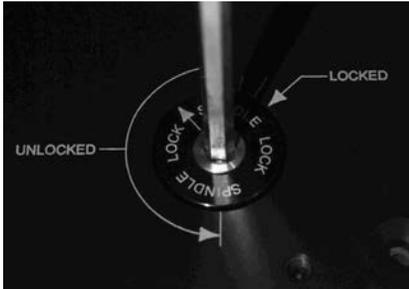
<u>Fraction</u>	<u>Decimal</u>	<u>Number of Revolutions</u>
1/64"	0.016"	1/4 Revolution
1/32"	0.031"	1/2 Revolution
1/16"	0.062"	1 Revolution
1/8"	0.125"	2 Revolutions
1/4"	0.250"	4 Revolutions
1/2"	0.500"	8 Revolutions

USING THE CAM LOCK ON YOUR MAST-R-LIFT™ II

With the Mast-R-Lift™ II you have the added benefit of locking your Lift in a desired position for long term routing operations and having the comfort in knowing the position you have set is locked in place.



To lock your lift, turn lift handle clockwise to the "LOCKED" position



To unlock your lift, turn lift handle counter-clockwise to the "UNLOCKED" position

RE-ADJUSTING THE THREAD TENSION

All JessEm Lifts feature our patented thread tensioning design. Thread tension is set at the factory and depending on the amount of use you may have to reset this adjustment periodically, depending on the amount of tension you desire.

If the bit height ever begins to change (or drop) during use, the thread tensioning likely needs to be reset.

1. Turn the Lift upside down on a table with the threaded height adjustment rod facing you.
2. Remove the 1/4-20 x 1" Cap Screws from the Carriage Nut Cover (Figure 11) and remove the cover and o-ring (Figure 12)

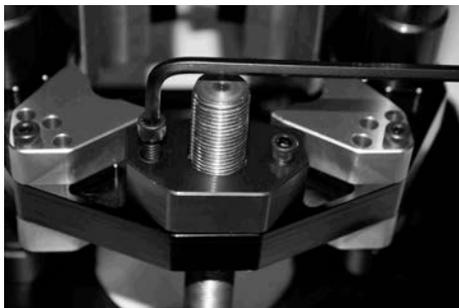


Figure 11

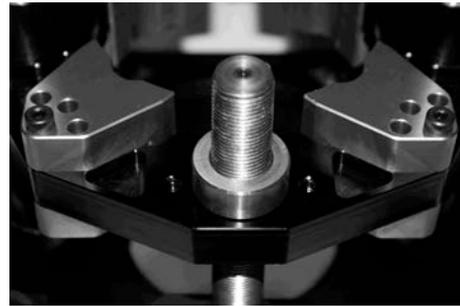


Figure 12

3. Slide the carriage all the way up towards the top plate of your Mast-R-Lift™ II

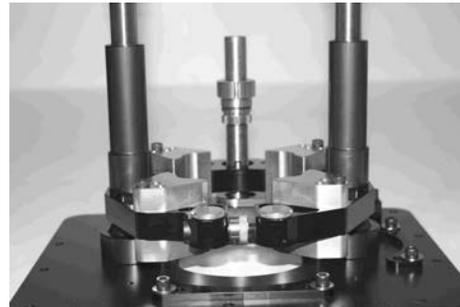


Figure 13

4. Turn the carriage nut clockwise ensuring when you complete your adjustment that the slot in the carriage nut aligns with one of the slots on the antibracklash nut. (Figure 14)

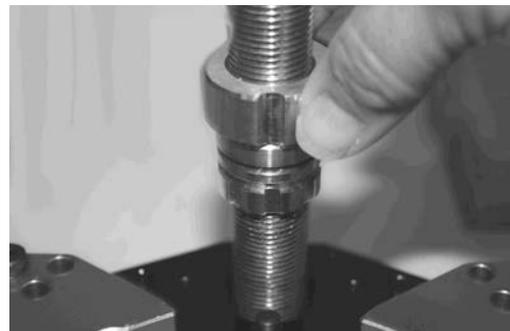


Figure 14

5. Slide the carriage back up ensuring the dowel pin in the carriage aligns with the slot in the carriage nut. (Figure 15)

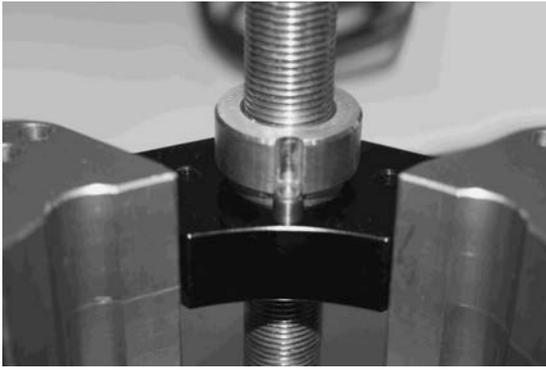


Figure 15

6. Place back the o-ring and carriage nut cap and with the screws you removed in Step 2 (Figure 11) fasten the carriage nut cap securely

JESSEM TOOL LIMITED WARRANTY

All JessEm products are warranted to be free from defects in material and workmanship. JessEm will repair or replace any product which upon inspection proves to be defective for a period of (1) year from dated receipt and proof of purchase. All warranty claims should be made direct to JessEm Tool Company. Contact JessEm for a warranty claim return authorization and instructions to proceed. The consumer is responsible for shipping costs to return product to JessEm Tool Company. We will repair or replace the product at our discretion and JessEm Tool will return shipment to you at no charge.

WARRANTY LIMITATIONS

This warranty does not cover:

- Repairs or alterations made or attempted by anyone other than JessEm Tool Company or an authorized JessEm service professional.
- Normal wear and tear
- Abuse, misuse or neglect.
- Improper care or maintenance.
- Continued use after partial failure.
- Products that have been modified in any way.
- Products used with improper accessories.
- Premature thread wear due to adjusting height with electric or cordless drill.