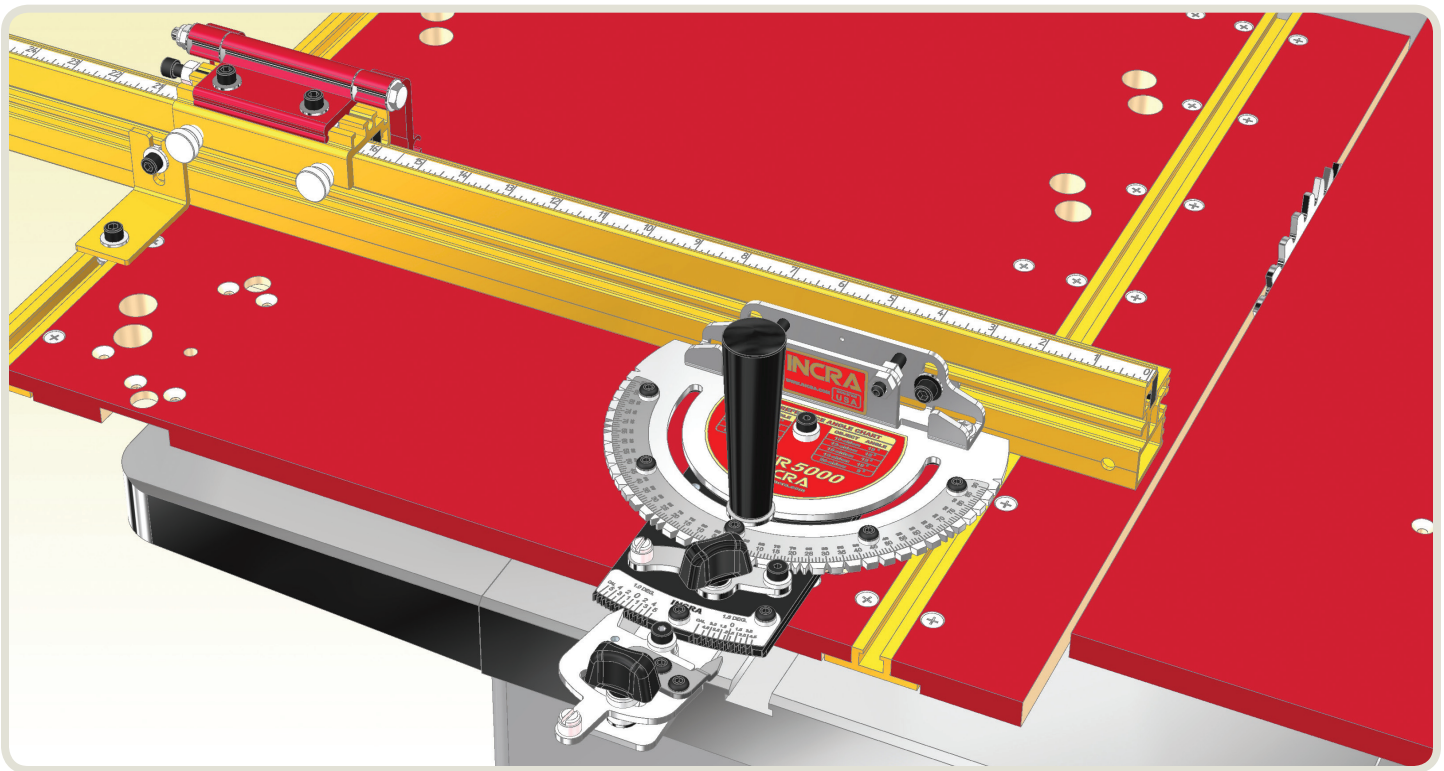


# MITER 5000™ by INCRA®

## OWNER'S MANUAL

Before using the **INCRA Miter5000**, read and follow all of the instructions and safety information in this owner's manual.



### SAFETY

#### Important safety instructions for using the **INCRA Miter5000**

**Before using the INCRA Miter5000, read and follow all of the instructions and safety information in this owner's manual.**

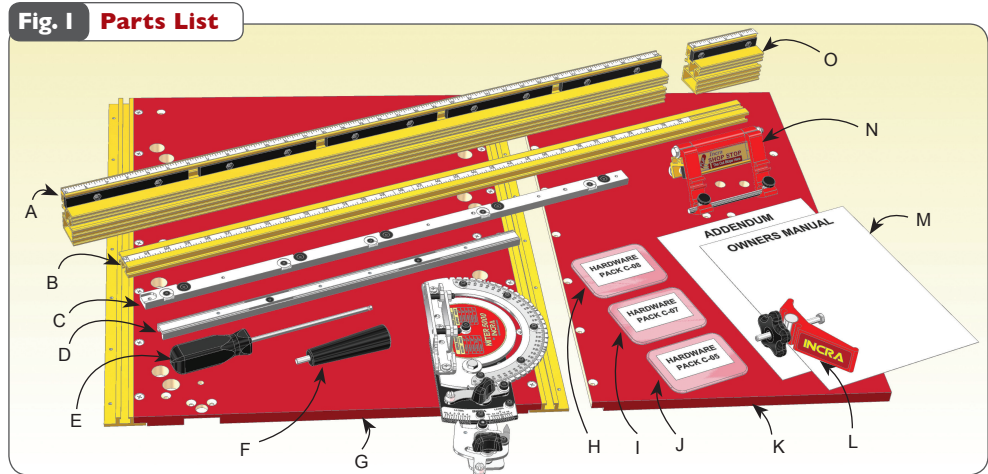
- When using the INCRA Miter5000 in conjunction with any other tool, first read and follow all instructions and safety information in that tool's owner's manual.
- Never let the saw blade come in contact with the aluminum or steel components of the INCRA Miter5000.
- Before making any cut, always make sure that the Miter5000's Sled Base Right is locked securely in the right hand miter slot.
- When using the INCRA Miter5000, always keep your hands clear of the saw blade and the line of cut.
- Always turn off the power and make sure that the saw blade comes to a complete stop before changing the setting of any part of the INCRA Miter5000.
- Always securely tighten the large black clamping knob before starting any cut.
- Wear safety glasses, hearing protection, and follow all normal shop safety practices.
- After making any adjustments to the miter angle or fence position of your INCRA Miter5000, always verify safe clearance between the blade and fence before turning on the saw.
- After making any adjustments to the fence position on the INCRA Miter5000, always make sure that the four socket head screws on the fence mounting bracket and the outboard fence lock are securely tightened.
- When using the INCRA Flip Shop Stop to position a piece for a cut, always hold or otherwise clamp the board between the stop and the blade.

## PARTS LIST

### Carefully Unpack Components

After carefully unpacking all components, remove the (2) Phillips flat head screws and rectangular nuts that secure the (2) Miter Sled base panels and steel miter bar. Also, remove the Phillips head screw that secures the aluminum miter bar to the protractor head. **Fig. 1** depicts the components you should have received. Identify each part as listed below:

- A** 32" Flip Fence
- B** Extender Bar
- C** Steel Miter Bar
- D** Aluminum Miter Bar
- E** 3/16" Ball End Hex Tool
- F** Large Clamping Knob
- G** Left Sled Base w/Protractor Head Assembly
- H** Hardware Pack C-08
- I** Hardware Pack C-07
- J** Hardware Pack C-05
- K** Right Sled Base
- L** Build-It Clamp
- M** Owner's Manual
- N** Flip Shop Stop
- O** 4" Flip Fence Extender



## LEFT OR RIGHT SIDE OF BLADE?

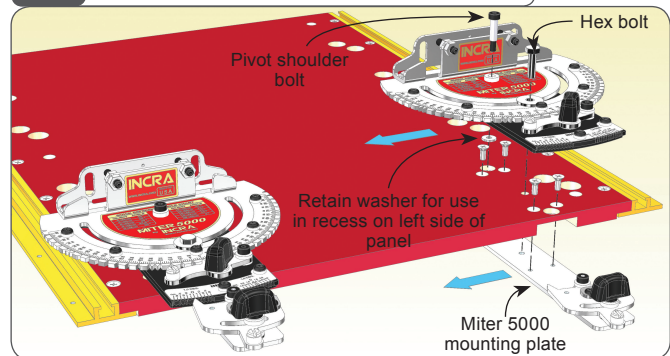
### IMPORTANT - PLEASE READ BEFORE ASSEMBLY

Your new Miter 5000 is factory configured for use on the left side of your blade. This configuration works well with right hand blade tilt table saws. If you have a right tilt table saw proceed directly to the instructions starting on page 3. If you have a left hand blade tilt table saw, the Miter 5000 can be converted for use on the right side of the blade. Just follow the instructions below.

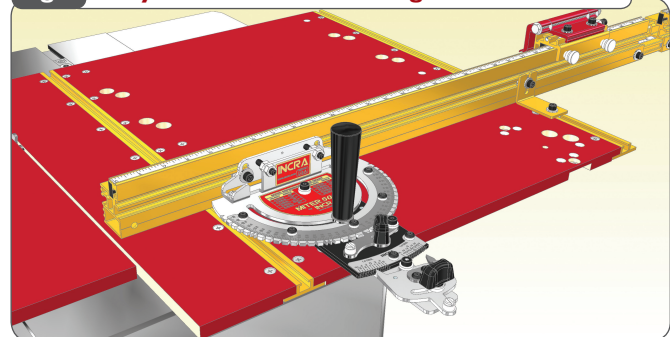
Remove the hex bolt and the 1/4 x 3/4 pivot shoulder bolt and washers that secure the protractor head to the miter sled and lift the protractor top and bottom plates off. (Retain the 1/2" o.d. steel washer located in the recess on the sled base for reassembly.) Next remove the (4) Phillips flat head screws that secure the Miter 5000 mounting plate assembly to the bottom of the sled base. Now re-assemble the mounting plate assembly and protractor onto the opposite side of the sled base. Be sure to place the 1/2" o.d. steel washer in the recessed hole on the sled base before re-mounting the protractor. See **Fig. 2**.

You can now continue using the assembly instructions. Just remember that you are setting up the unit for use on the right side of the blade. During assembly, when the owner's manual makes reference to the **right** miter slot, perform the assembly instruction in the **left** miter slot. Conversely, when the owner's manual calls for the **left** miter slot, perform the assembly instruction in the **right** miter slot. A set of reverse reading scales is included for use when later assembling the fence to the protractor. Refer to **Fig. 3** to maintain proper orientation during assembly.

**Fig. 2 Conversion for Right Side of Blade**



**Fig. 3 Fully Assembled View - Right Side of Blade**



## ASSEMBLY

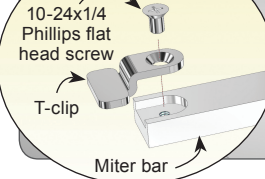
### 1. Adjust the Steel Miter Bar

Open hardware pack C-07 and using the supplied 3/32" hex key, adjust the miter bar at each of the (5) expansion mechanism locations (white disks only) for a good fit in your table saw's left hand miter slot. Turning the screw clockwise expands the mechanism. Expand a little at each of the locations until the bar slides smoothly with no side play. You can thread the large clamping knob into the bar while adjusting to aid in sliding the bar in your miter slot, **Fig. 4**. If the miter slot in your table saw has a T-slot, attach the T-clip to the end of the bar as shown in **Fig. 5**.

**Fig. 4 Adjust Steel Miter Bar**

Adjust each of the (5) white expansion disks

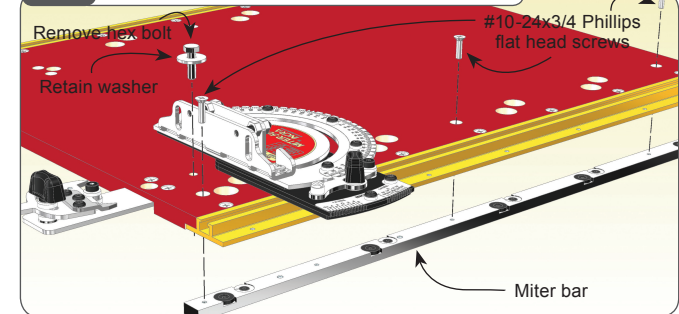
**Fig. 5 Attach T-Clip**



### 2. Attach Left Sled Base to Miter Bar

Using (3) #10-24 x 3/4" flat head Phillips screws, attach the left sled base to the steel miter bar. To access the rear mounting hole position, remove the hex bolt that secures the protractor head and disengage the rear actuator tooth from the 1/2° adjustment plate. (Retain the large washer for use with the large clamping knob.) Pivot the protractor head for access to the rear mounting hole and tighten all (3) fasteners, **Fig. 6**. Check the sliding motion of your sled base now and adjust before continuing.

**Fig. 6 Attach Left Sled Base to Miter Bar**

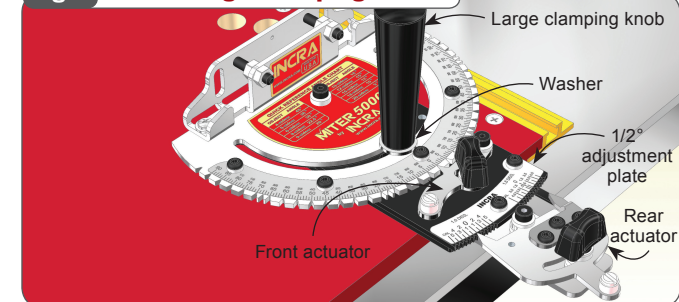


**Tip: Future fine adjustments to the miter bar's expansion mechanisms can be made through the access holes in the sled base left. Pivot the protractor head as described above for access to the rear expansion location.**

### 3. Install Large Clamping Knob

Pivot the protractor head to firmly re-engage the left hand tooth of the rear actuator with the 0° notch on the 1/2° adjustment plate and tighten the thumbscrew. Place the large washer retained in step 2 on the large clamping knob and thread through the slotted hole in the protractor head into the sled base left. Before tightening, engage the front actuator tooth with the 0° notch on the protractor head. Tighten the front actuator thumbscrew, then the large clamping knob, **Fig. 7**.

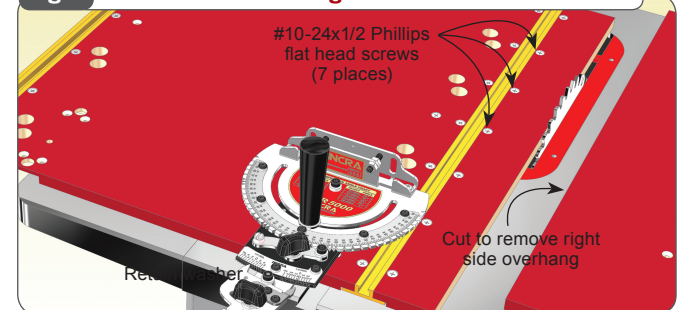
**Fig. 7 Install Large Clamping Knob**



### 4. Attach Sled Base Right and Cut-off Overhang

Using (7) #10-24 x 1/2" flat head Phillips screws, attach the sled base right to the panel connector on the sled base left. Raise your saw blade about 3/4" and make a cut to remove the portion of the sled base right that extends to the right of the blade, **Fig. 8**. Turn off the saw, lower the blade and remove the sled base left from the table saw.

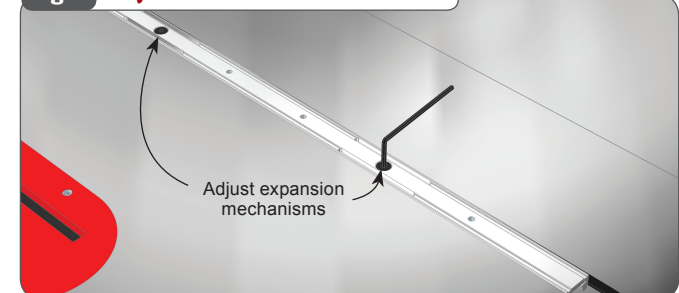
**Fig. 8 Attach Sled Base Right and Cut-off Overhang**



### 5. Adjust Aluminum Miter Bar

Using the supplied 3/32" hex key, adjust the aluminum miter bar at each of the (2) expansion mechanism locations for a good fit in your table saw's right hand miter slot. Turning the screw clockwise expands the mechanism. Expand a little at each of the locations until the bar slides smoothly with no side play, **Fig. 9**.

**Fig. 9 Adjust Aluminum Miter Bar**



### 6. Attach remainder of Sled Base Right and Cut-off Overhang

Using (4) #10-24 x 3/4" flat head Phillips screws, attach the remainder of the sled base right to the aluminum miter bar. Use the mounting holes that permit the least amount of overhang beyond the left side of the saw blade. Raise the saw blade about 3/4" and make a cut to remove the portion of the base right that extends beyond the left side of the blade, **Fig. 10**. Turn off the saw, lower the blade and return the sled base left to the table saw.

In use, only the sled base left slides to move your workpiece through a cut. The sled base right will be positioned adjacent to the blade and locked in place by tightening the (2) expansion mechanisms to provide zero clearance and workpiece cutoff support, **Fig. 11**. Additional base right panels can be purchased and cut as described above with the blade tilted for zero clearance support during compound mitering. Just mark each of the panel parts with the blade tilt angle for future reference.

### 7. Attach Fence and Fence Extender to Sled Base Left

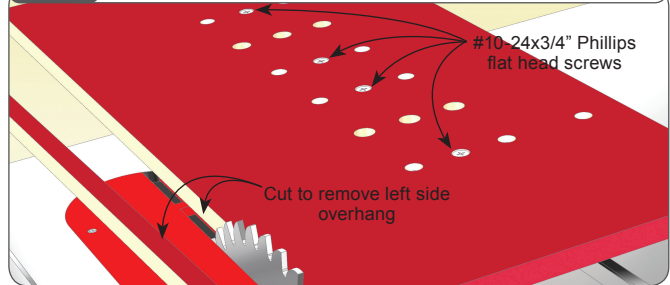
Open hardware pack C-08 and using (2) 1/4-20 x 1/2" socket head screws with washers and rectangular nuts, attach the fence to the fence mounting bracket. Slide the fence to a position that leaves safe clearance between the fence and blade then tighten the (2) fasteners, **Fig. 12**. Loosely install (1) 1/4-20 x 3/8" socket head fastener with washer and rectangular nut to the left end of the fence and slide extender bar into fence with the scale face up. (The higher numbers on the scale should go in first.) Loosely install (2) 1/4-20 x 3/8" socket head screws with washers and rectangular nuts to the 4" fence extender and slide onto the end of the extender bar. Position the 4" fence extender flush with the end of the extender bar and tighten all (3) fasteners, **Fig 13**.



#### TIP About your Fence Scales

All INCRA products use overlapping 16" long Lexan scales. The overlap allows fine-tuning the scale from one end to the other to agree with the high degree of accuracy provided by the INCRA saw toothed positioning racks. As they are slid into the scale slot on the fence, the ends are overlapped and aligned using the optical window located at the end of the second scale. The friction fit will keep the scales in place. If you wish, you can use a small piece of double faced tape at the overlap to ensure that the scales move together when changing your zeroed setups for mitering.

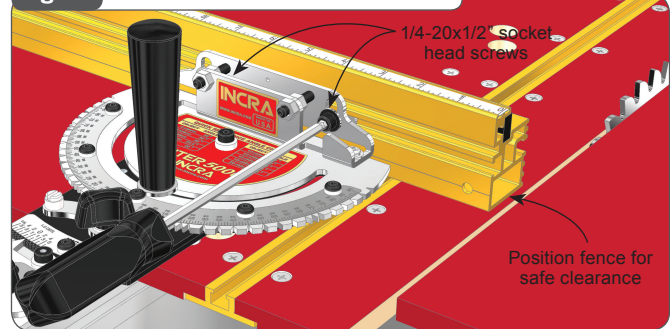
**Fig. 10 Attach Sled Base Right and Cut-off Overhang**



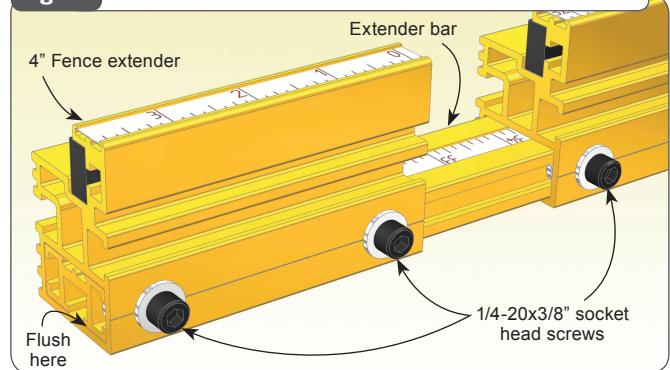
**Fig. 11 Sled Base Panel Functions**



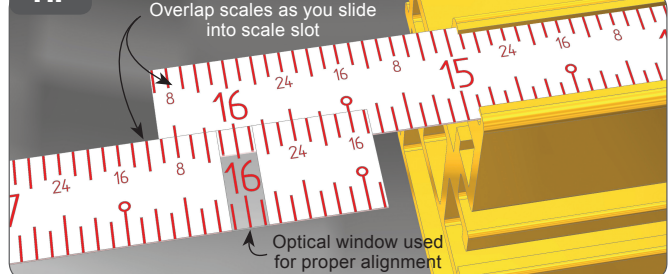
**Fig. 12 Attach Fence to Protractor**



**Fig. 13 Attach Extender Bar and 4" Fence Extender**



#### TIP



### 8. Attach Outboard Fence Lock

Loosen the large clamping knob, disengage the front actuator and pivot the fence just over the left rear corner of the sled base, (about 20°). Loosely install (1) 1/4-20 x 1/2" socket head screw with washer and rectangular nut through the hole in the outboard fence lock. Slide the remaining 1/4-20 x 1/2" socket head screw with washer and rectangular nut into the T-slot on the back of the fence. Slide the slotted end of the outboard fence lock under the washer on the fence fastener then slide the rectangular nut of the other fastener into the T-slot on the gold panel connector, **Fig. 14**. Rotate the fence to engage the front actuator with the 0° notch on the protractor head. Tighten the front actuator thumbscrew then tighten the large clamping knob.

In operation, after setting the protractor head angle and tightening the large clamping knob, you must tighten the outboard lock to the fence before tightening to the sled base. Try setting a few angles to get the hang of it, then leave both outboard lock fasteners loose as you continue with the final calibration.

## CALIBRATION

### 1. Adjust Fence Mounting Bracket 90° to Cut Edge of Sled Base Left

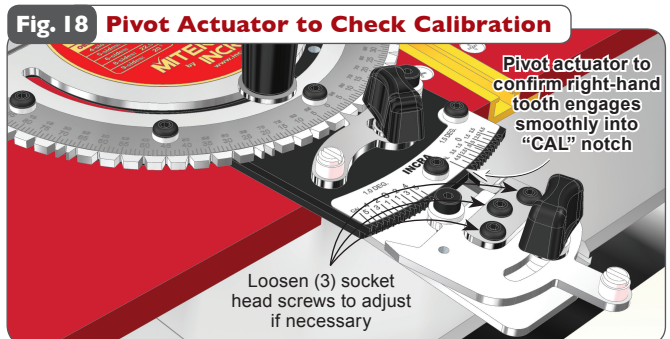
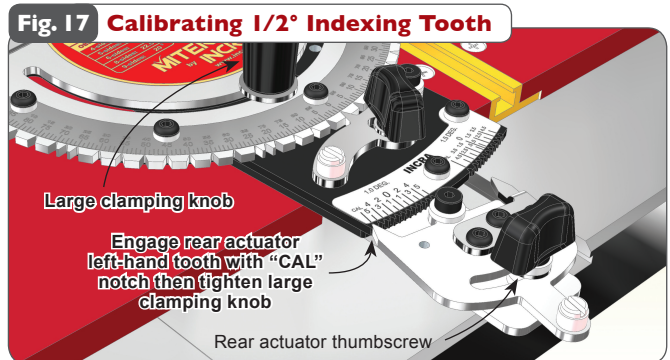
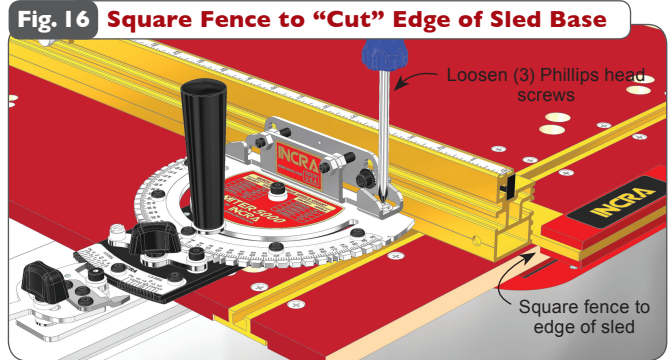
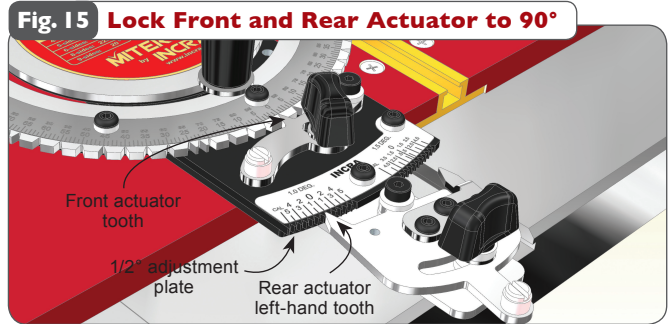
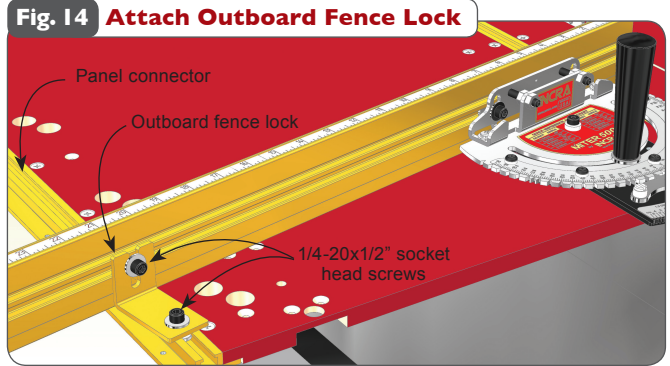
Loosen the large clamping knob and make sure that the rear actuator left hand tooth is engaged firmly with the 0° notch on the 1/2° adjustment plate. Engage the front actuator tooth with the 0° notch located on the protractor head, **Fig.15**. Tighten the front actuator thumbscrew then tighten the large clamping knob.

Using a Phillips head screw driver, loosen the (3) Phillips head screws that secure the fence-mounting bracket to the protractor head. Unplug your table saw, then use a reliable machinist square to set the fence at 90° to the cut right hand edge of the sled base, **Fig. 16**. Tighten the (3) Phillips head screws. This one time calibration prepares your INCR A Miter5000 for work. Just remember that the accuracy of the INCR A Miter5000 at any subsequent setting is dependent upon the accuracy of your initial 90° calibration. After completing the Calibration and Operation sections of this manual, verify this important calibration with a test cut and fine tune as necessary.

### 2. Calibrating the 1/2° Indexing Tooth

The 1/2° indexing tooth located on the rear actuator should be factory calibrated and should require no further adjustment. Follow the instructions below should you wish to check the calibration or re-calibrate.

Loosen the large clamping knob and the rear actuator thumbscrew. Engage the left-hand tooth of the rear actuator firmly with the notch marked "CAL" on the rear scale and hold while you tighten the large clamping knob, **Fig. 17**. Now pivot the rear actuator to engage the right-hand tooth with the notch marked "CAL" on the rear scale, **Fig. 18**. If adjusted properly, it will pivot perfectly into the notch. To adjust, loosen the (3) socket head screws that secure the tooth and fine tune the position to align with the "CAL" notch. Pivot back and forth between the two "CAL" notches to verify the calibration.



## OPERATION - CHANGING ANGLE SETTINGS

The dual actuator design of the INCRA Miter5000 provides two levels of adjustment. The front actuator is used for coarse adjustments (5°), while the rear actuator is used for fine adjustments (1/2°). For most mitering work, you'll have the left-hand tooth of the rear actuator engaged at the 0°, while you make angle changes using only the front actuator. When using the rear actuator for fine adjustments, you are simply adding or subtracting from the coarse adjustment setting.

### 5° Indexing (including 22.5 and 67.5°) settings

1. Loosen the large clamping knob and make sure that the rear actuator left hand tooth is engaged in the 0° notch on the 1/2° adjustment plate. Loosen the front actuator thumbscrew and pivot the actuator tooth away from the notches located on the protractor head, **Fig. 19**.

2. Rotate the protractor head to the desired angle then firmly engage the tooth on the front actuator with the corresponding notch on the protractor head. The actuator tooth should point directly to the desired angle on the scale. Tighten the large clamping knob, then tighten the front actuator thumbscrew, **Fig. 20**.

### 1/2° Indexing

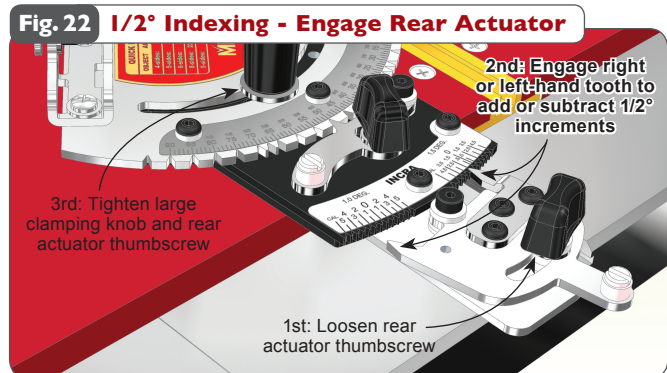
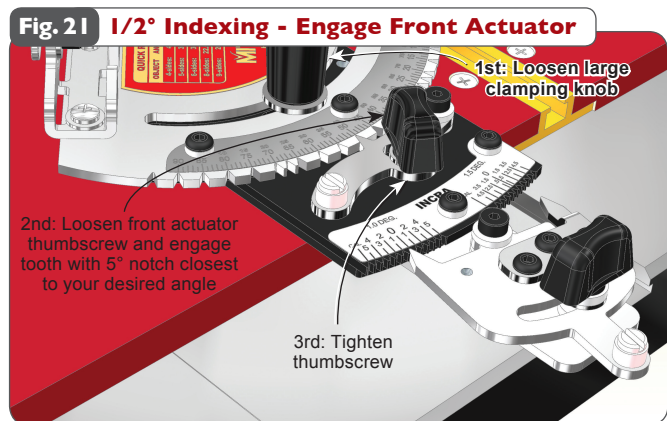
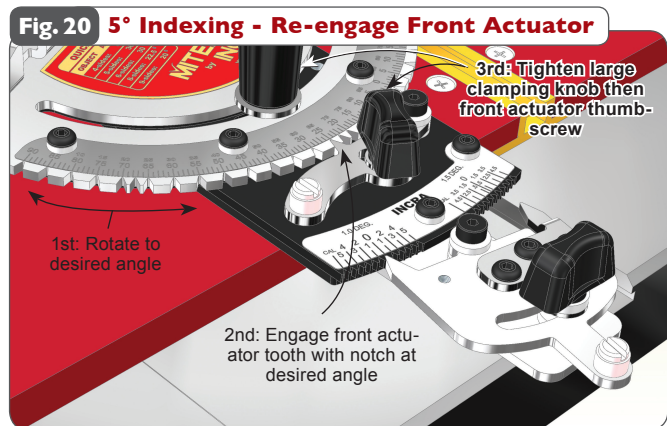
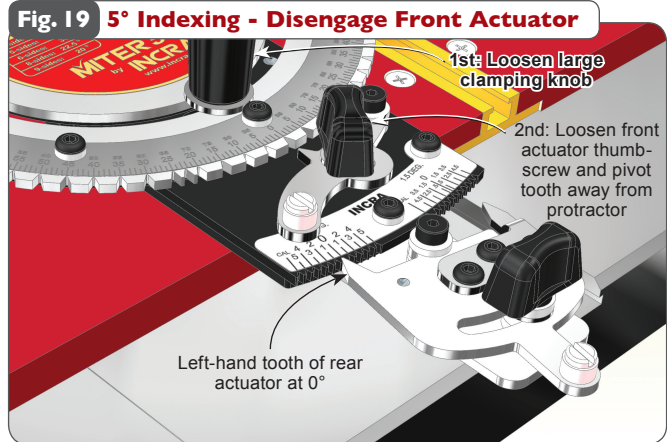
1. Loosen the large clamping knob. Loosen the front actuator thumbscrew and pivot the actuator tooth away from the notches located on the protractor head. Rotate the protractor head and engage the front actuator tooth at the 5° notch closest to the angle you want. Tighten the front actuator thumbscrew, **Fig. 21**.

2. Loosen the rear actuator thumbscrew. Use the left-hand tooth to add or subtract from the coarse adjustment setting in 1° intervals. Use the right-hand tooth to add or subtract from the coarse adjustment setting in 1/2° intervals. Engage the tooth firmly in the selected notch then tighten the large clamping knob and the rear actuator thumbscrew, **Fig. 22**. **Important: After completing your cut don't forget to return the rear actuator setting to the 0° notch.**

### Continuous Adjustments

For angle settings finer than the 1/2° settings, first use the 1/2° indexing instructions above to locate the protractor head as close as possible to the desired angle. With the large clamping knob loosened, pivot the rear actuator tooth slightly away from the notch on the 1/2° adjustment plate. Rotate the protractor head in the direction of required adjustment and tighten the large clamping knob. Do not tighten the rear actuator thumbscrew. As with any mitering tool, odd angle adjustments may require a little trial and error.

**Caution:** After making any adjustments to the miter angle of your INCRA Miter5000, always verify safe clearance between the fence and the blade before turning on the saw.



## FLIP FENCE AND FLIP SHOP STOP - CALIBRATION AND OPERATION

As you look at your new INCRA Flip Shop Stop and Flip Fence for the first time you will see an interesting detail. The front face of the fence uses a tongue and groove arrangement to accept a mating feature on the flip arms, **Fig. 23**. When the flip arm is down with the two opposing features engaged, it becomes impossible for the sharp corner of a mitered board end to wedge between the fence and flip arm. Combined with INCRA's famous incremental positioning capabilities, you'll soon be duplicating cut off lengths with machine shop precision.

### Zeroing the Fence Scales

To zero the main fence scale for 90° work, first set the protractor to the 0° setting and lock in place. Clamp the Flip Shop Stop to the fence so that the 0" mark on the fence scale reads directly under the end of the gold component of the Flip Shop Stop, **Fig. 24**. Now loosen the (2) 1/4-20 socket head screws that secure the fence to the fence mounting bracket and slide the fence toward the blade until the Flip Arm on the stop contacts the blade. Re-tighten the fasteners, **Fig. 24A**.

For stopped cuts beyond the range of the main fence you'll need to calibrate the extender bar scale. Clamp the INCRA Flip Shop Stop to the 4" fence extender. (Use the scale on the short section of fence as a reference for clamping the stop to the same position each time you use it.) Now loosen the 1/4-20 socket head screw located at the end of the longer fence and slide the 4" fence and extender bar out. Use a tape measurer to set the distance between the blade and the Flip Arm at 34-1/2" and re-tighten the fastener, **Fig. 25**. Now simply slide the scale in the extender bar to read 34-1/2" at the end of the longer main fence section, **Fig. 25A**.

For mitered cutting, a test cut is often the most accurate means of setting the fence and extender bar scales since measuring to the tooth of a blade set at an angle to the fence can be difficult. Begin by setting the desired miter angle and check for safe clearance between the fence and blade. Clamp the stop to the fence about 10" away from the blade. Miter a piece of scrap stock with this setup. Measure the length of the cut piece, **Fig. 26**. Then simply slide the scale on the fence to read the length of the cut directly under one end of the stop.

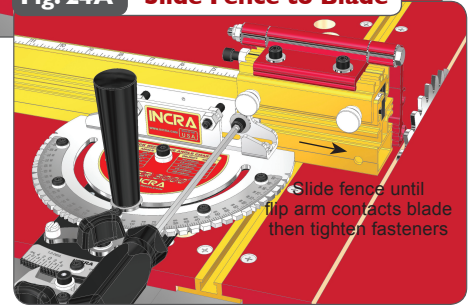
**Fig. 23 Flip Shop Stop**



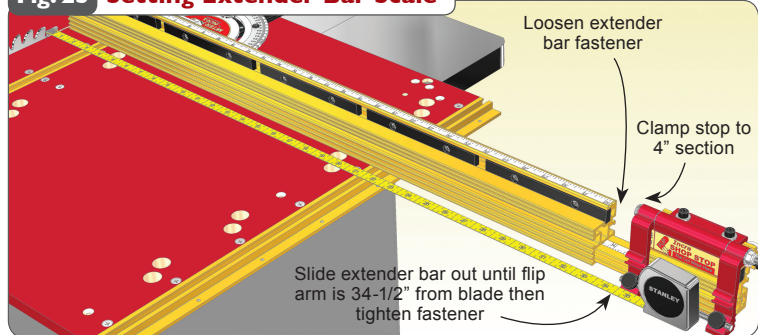
**Fig. 24 Zeroing Fence Scale**



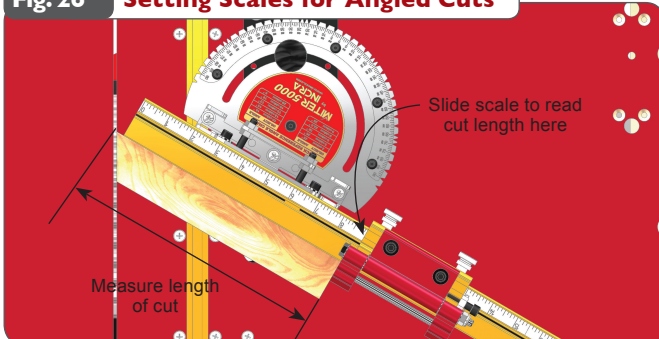
**Fig. 24A Slide Fence to Blade**



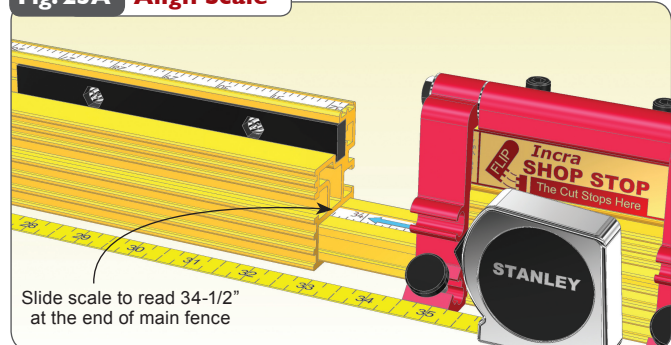
**Fig. 25 Setting Extender Bar Scale**



**Fig. 26 Setting Scales for Angled Cuts**



**Fig. 25A Align Scale**



### Micro Adjusting

To micro adjust your Flip Shop Stop's position, begin by loosening the (2) socket head screws located on the top of the stop body. Now turn the micro adjust socket head screw to fine tune the stop position, **Fig. 27**. When unscrewing the micro adjust screw, apply pressure to the stop body to keep it against the screw end. After adjustment, always tighten the (2) socket head screws on top of the stop body.

### Flip Arms and Stop Rods

The dual flip arms and stop rods provide a variety of stop configurations. The flip arms can be used without the stop rods when you want to take advantage of the fence/arm tongue and groove feature for stop control on mitered board ends. Typically, you will use the longer arm to join the two arms together. This produces an arrangement that, when pivoted, moves both arms simultaneously. The rod can be positioned so that it is the actual stop surface or it can be positioned slightly behind the front of the arm so that the aluminum arm is the actual stop surface.

By placing one of the shorter 1-1/2" rods in each of the two stop arms, you can use the two stop arms independently, **Fig. 28**. For example, you can calibrate one for work to the left of the blade and the other for work to the right. On one side of the blade you might want to position the stop rods to provide two different cut off lengths from one stop position. By using varying combinations of long or short rods you can create as much as 7-3/4" between the two stop positions.

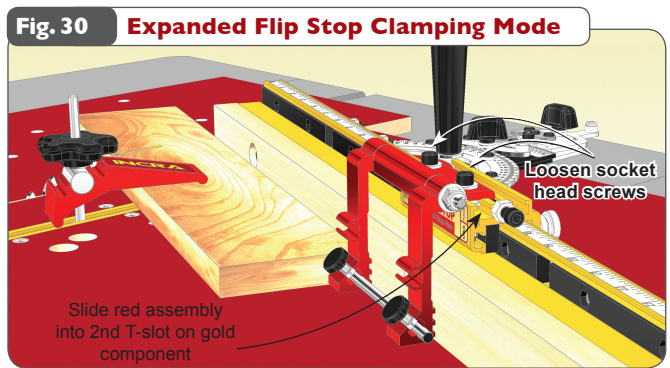
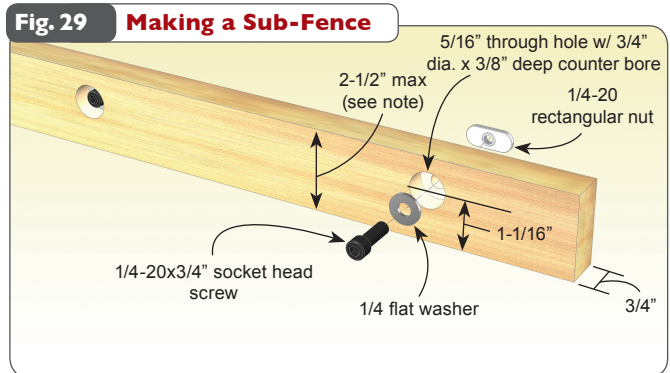
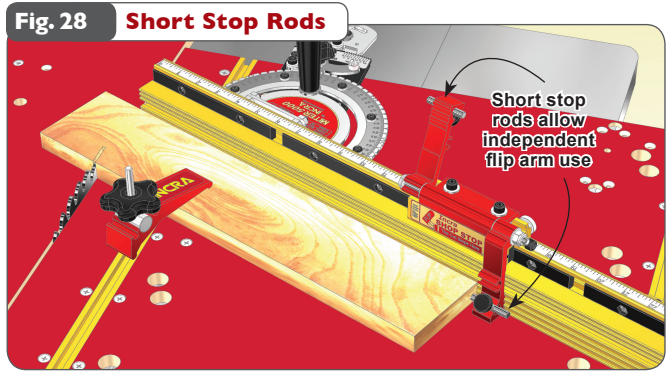
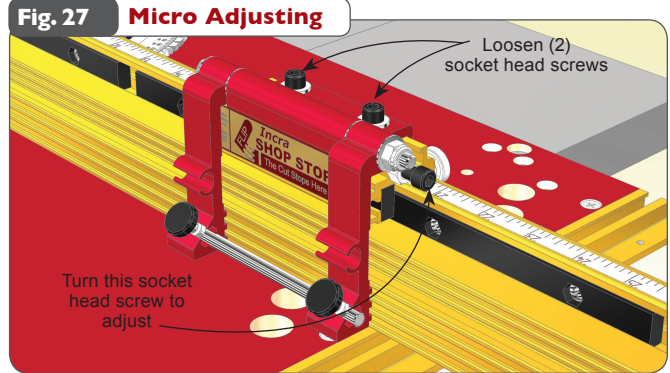
### Making a Zero Clearance Wooden Sub-Fence

A sub-fence can be used to provide tear out control as well as support for your workpiece up to and beyond the blade. A good material to use for making your zero clearance sub-fence is 3/4" medium density fiberboard (MDF). Use the drill and counter bore dimensions shown in **Fig. 29**. Attach using the supplied fasteners. Adjust the length of the fence to accommodate your application. Note: In applications where the incremental stopping capability of the Flip Shop Stop is required, the wooden sub-fence can be no taller than 2-1/2".

**TIP** To avoid the saw blade pulling your work-piece into the cut, add a strip of adhesive backed sandpaper to the front face of the wooden sub-fence.

### Expanded Flip Stop Clamping Mode

The two-part body design of the INCRA Flip Shop Stop allows for use with up to a 3/4" thick wooden sub-fence. To expand the INCRA Flip Shop Stop, loosen the (2) socket head screws located on the top of the stop body, then slide the upper portion of the stop off. Now slide the upper portion back on, capturing the rectangular nuts in the second T-slot located on the lower portion (gold component) of the stop body, **Fig. 30**.



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