Miter1000SE by INCRA®

OWNER'S MANUAL

SAFETY: Important safety instructions for using the **INCRA Miter1000SE**

- When using the INCRA Miter1000SE 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 Miter1000SE.

- When using the INCRA Miter1000SE, 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 Miter1000SE.

- 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 Miter1000SE, 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 Miter1000SE, always make sure that the two socket head screws 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.

Assembly and Calibration

1. Attach Clamping Knob and T-Clip

Remove the hex bolt that secures the protractor head and replace with the large threaded knob included in the hardware pack. The washer on the hex bolt must be used with the threaded knob, **Fig. 1**. If the Miter slot in your table saw has a T-slot, attach the T-clip to the end of the miter bar as shown in **Fig. 2**.
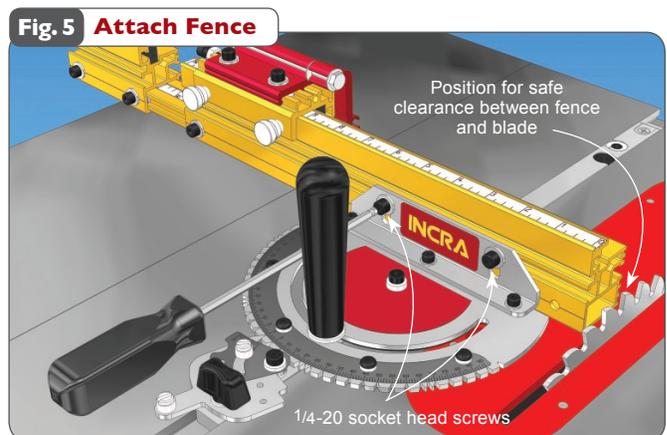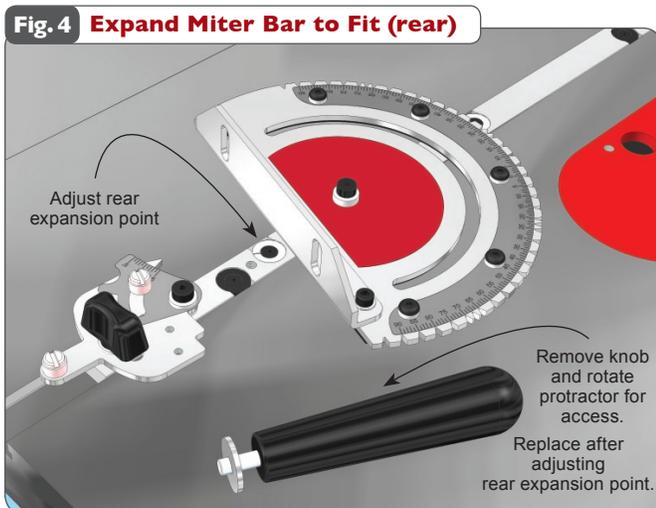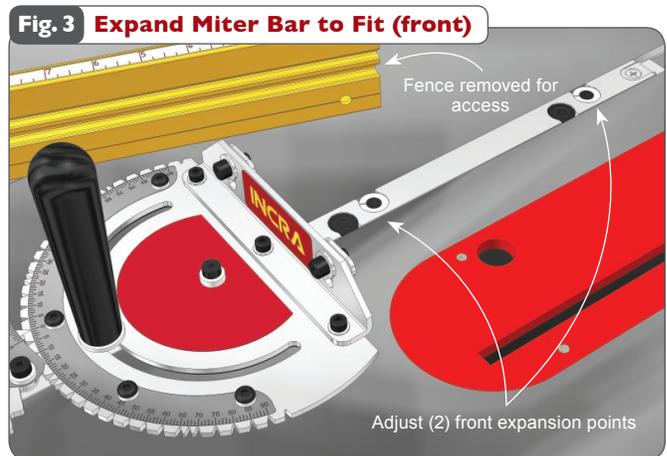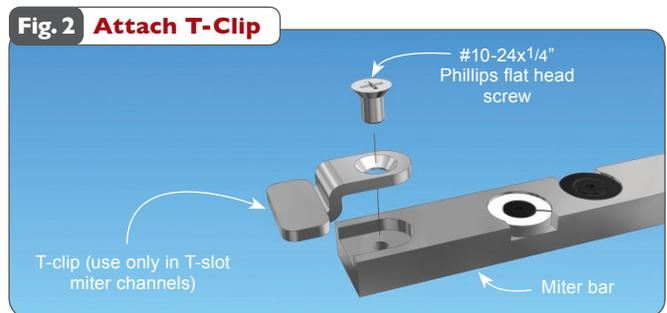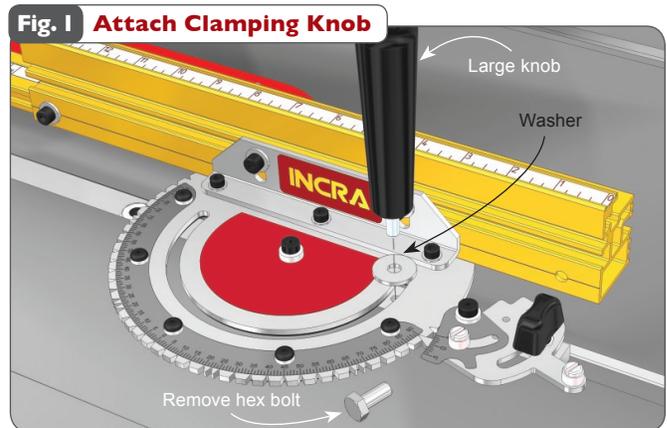
2. Adjust the Miter Bar

Loosen the (2) fasteners that secure the fence to the fence-mounting bracket and remove the fence. Adjust the miter bar at each of the (3) expansion mechanism locations in the miter bar for a good fit in your table saw's miter slot. Turning the screw clockwise expands the mechanism. You'll find (2) of the expansion locations in front of the protractor. Adjust these (2) front expansion points first, expanding a little at each of the locations until the bar slides smoothly, **Fig. 3**.

Remove the large clamping knob with washer and pivot the protractor head to gain access to the rear expansion point, **Fig. 4**. After adjustment, replace the washer and large clamping knob.

3. Attach the Fence

Place your Miter1000SE in the preferred miter slot at your table saw. (Note: Left hand miter slot use shown. See step 4 to convert fence for use in right hand miter slot.) Attach the fence to the fence mounting bracket and slide the fence to a position that leaves safe clearance between the end of the fence and the blade. Tighten the (2) $1/4$-20 fasteners, **Fig. 5**.

Fig. 1 Attach Clamping Knob

Large knob
Washer
Remove hex bolt

Fig. 2 Attach T-Clip

#10-24x$1/4$" Phillips flat head screw
T-clip (use only in T-slot miter channels)
Miter bar

Fig. 3 Expand Miter Bar to Fit (front)

Fence removed for access
Adjust (2) front expansion points

Fig. 4 Expand Miter Bar to Fit (rear)

Adjust rear expansion point
Remove knob and rotate protractor for access.
Replace after adjusting rear expansion point.

Fig. 5 Attach Fence

Position for safe clearance between fence and blade
1/4-20 socket head screws

4. Left or Right of Blade

Your new Miter1000SE fence is factory configured for use to the left of the blade. If you prefer to use your Miter1000SE in the right hand miter slot just follow the steps below.

Loosen the $^1/4$-20 socket head screw located at the end of the 14" section of the fence, then slide out the 4" section of fence along with the attached extender bar. Move the socket head screw, washer and rectangular nut to the hole on the opposite end of the fence. Slide the extender bar assembly into the end of fence, capturing the rectangular nut in the T-slot on the extender bar. The higher numbers on the extender bar scale should be closest to the saw blade. Loosen the (2) socket head fasteners that secure the 4" section of fence and reverse it. Tighten all fasteners, **Fig 6**. Slide the scale in the top of the fence out and replace with the included reverse reading (0-14") scale.
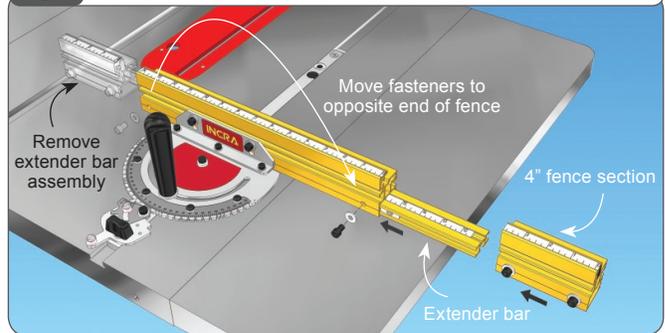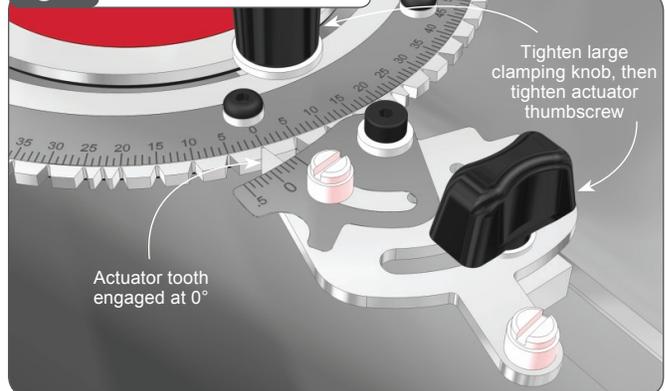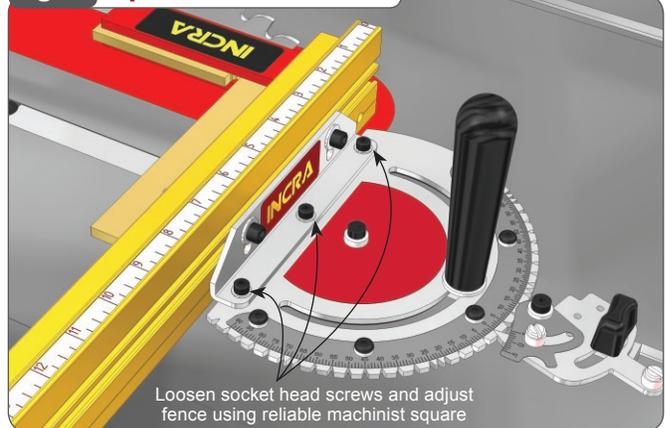
5. Adjust Fence Mounting Bracket 90° to Saw Blade

Set the protractor head to read 0°, engaging the tooth on the actuator firmly into the 0° notch on the protractor head, **Fig. 7**. Tighten the large clamping knob then tighten the actuator thumbscrew.

Using the supplied $^5/32$" hex key, loosen the (3) socket 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 saw blade, **Fig. 8**. Tighten the (3) socket head screws.

This one time calibration prepares your INCRA Miter1000SE for work in either miter slot. Just remember that the accuracy of the INCRA Miter1000SE at any subsequent setting is dependent upon the accuracy of your initial 90° calibration. **Verify this important calibration with a test cut and fine tune as necessary.**

Fig. 6 **Converting Fence for use on Right Side of Blade**

Remove extender bar assembly

Move fasteners to opposite end of fence

4" fence section

Extender bar

Fig. 7 **Set Protractor to 0°**

Tighten large clamping knob, then tighten actuator thumbscrew

Actuator tooth engaged at 0°

Fig. 8 **Square Fence to Blade**

Loosen socket head screws and adjust fence using reliable machinist square

💡 TIP SQUARING THE FENCE TO YOUR TABLE SAW TOP

The method used to join the fence-mounting bracket to the protractor head makes it easy to fine-tune the fence perfectly perpendicular to your tabletop. To adjust, loosen the (3) socket head screws that secure the bracket and slide a paper shim between the bracket and the protractor head. Placing the shim behind the screws will decrease the angle. Placing the shim in front of the screws will increase the angle.

Operation – Changing Angle Settings

Before using your new INCRA Miter1000SE for the first time, take a few moments to review these important operational procedures.

1. 5° Indexing (including 22¹/2° and 67¹/2° settings)

Loosen the actuator thumbscrew and pivot the actuator tooth away from the notches located on the perimeter of the protractor head. Loosen the large clamping knob and rotate the protractor head and fence to the desired angle, **Fig. 9**. Then firmly engage the tooth on the 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 actuator thumbscrew, **Fig. 10**.

2. Continuous Adjustments (for angle settings finer than 5° increments)

Pivot the actuator tooth away from the notches on the protractor head, aligning the arm over the miter bar, and tighten the thumbscrew. Now loosen the small nylon thumbscrew on the actuator and pivot the ¹/10° vernier cursor toward the scale. Rotate the cursor until it is aligned edge to edge with the scale and tighten the thumbscrew. When you change miter angles, just align the desired angle on the scale with the "0" cursor line, **Fig. 11**. For ¹/10° adjustments, use the alignments as described in the ¹/10° vernier instructions on page 8.
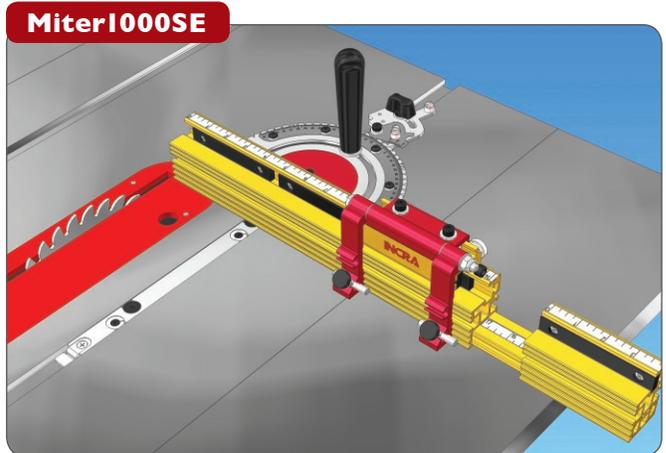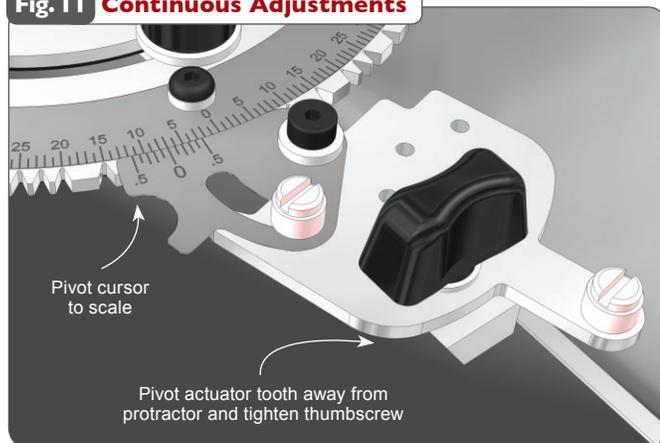
Miter1000SE

Fig. 9 **Changing Angles**

Loosen large clamping knob and actuator thumbscrew

Rotate protractor

Pivot the actuator tooth away from protractor

Fig. 10 **Locking the Protractor**

Tighten large clamping knob then tighten actuator thumbscrew

Firmly engage actuator tooth with protractor

Fig. 11 **Continuous Adjustments**

Pivot cursor to scale

Pivot actuator tooth away from protractor and tighten thumbscrew
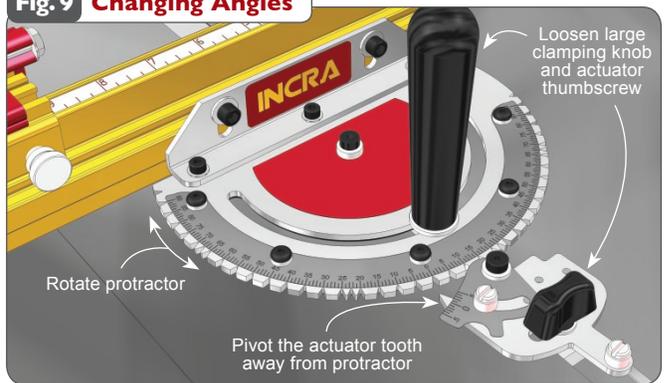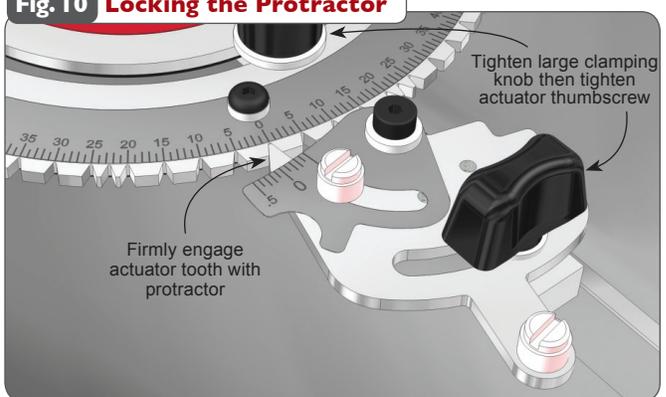
CAUTION:

AFTER MAKING ANY ADJUSTMENTS TO THE MITER ANGLE OF YOUR INCRA MITER1000SE, 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. 12**. 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.

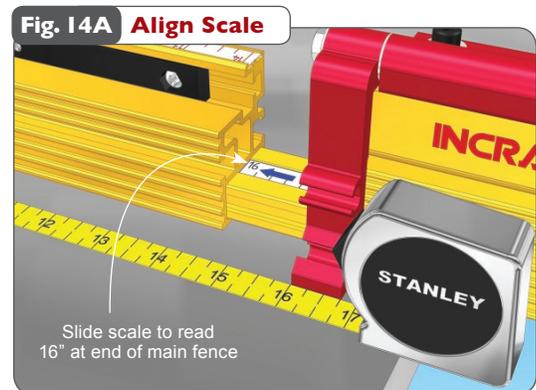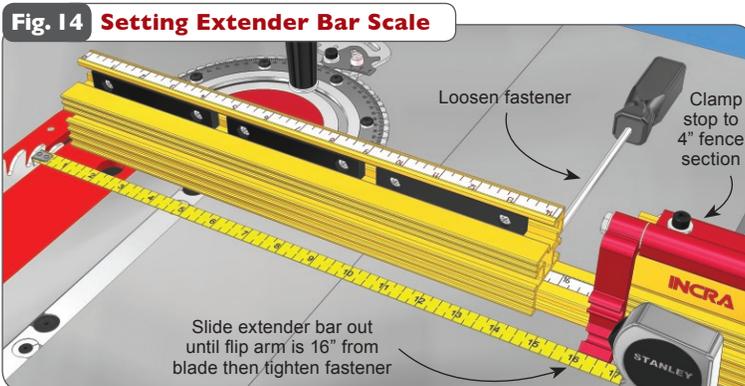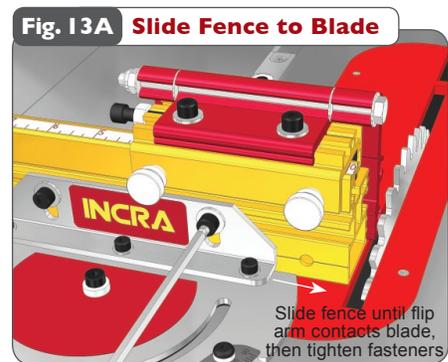**Fig. 12** **Flip Shop Stop**

Tongue and groove

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. 13**. 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. 13A**.

Fig. 13 **Zeroing Fence Scale**

Clamp Flip Shop Stop at 0" position

Protractor set at 0°
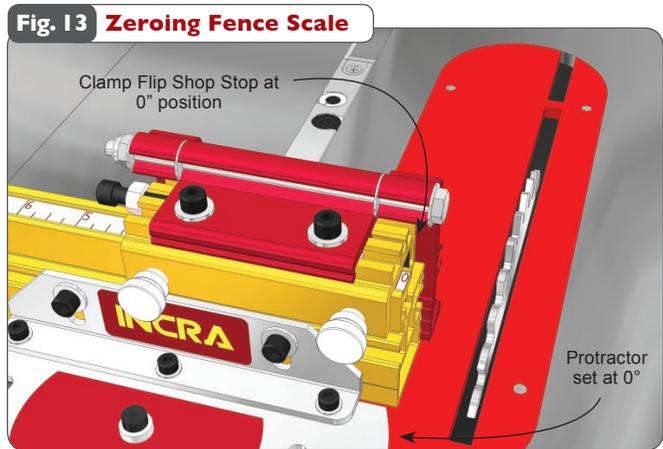
For stopped cuts beyond the range of the main fence you'll need to calibrate the extender bar scale. Clamp the INCRA Flip Shop Stop to the 4" fence extender. (Use the scale on the short section of fence as a reference for clamping the stop to the same position each time you use it.) Now loosen the ¹/4-20 socket head screw located at the end of the longer fence and slide the 4" fence and extender bar out. Use a tape measure to set the distance between the blade and the flip arm at 16" and re-tighten the fastener, **Fig. 14**. Now simply slide the scale in the extender bar to read 16" at the end of the longer main fence section, **Fig. 14A**.

Fig. 13A **Slide Fence to Blade**

Slide fence until flip arm contacts blade, then tighten fasteners

Fig. 14 **Setting Extender Bar Scale**

Loosen fastener

Clamp stop to 4" fence section

Slide extender bar out until flip arm is 16" from blade then tighten fastener

Fig. 14A **Align Scale**

Slide scale to read 16" at end of main fence

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. 14B**. Then simply slide the scale on the fence to read the length of the cut directly under one end of the stop.
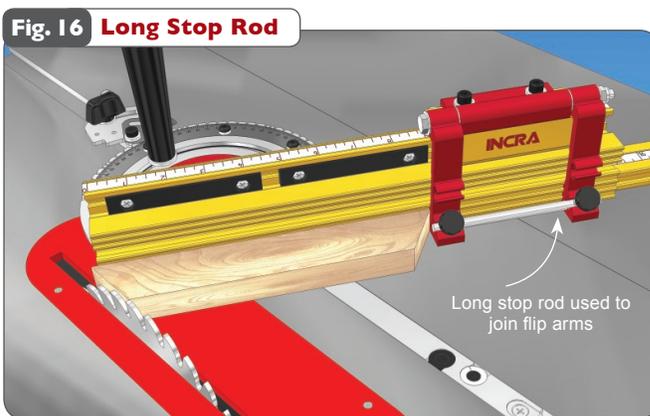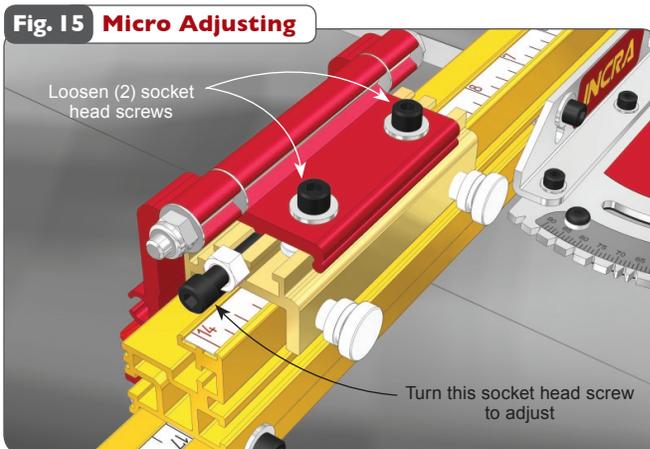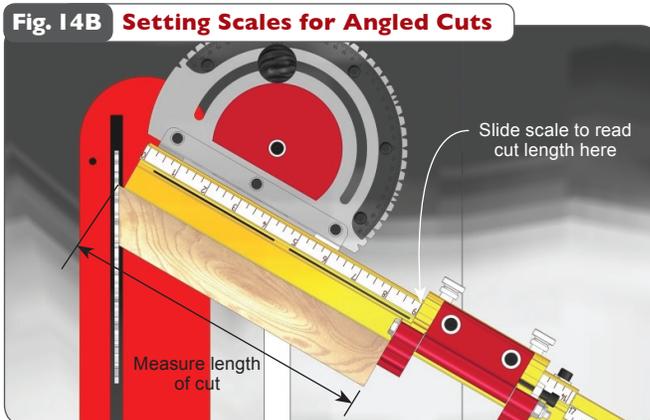
Micro Adjusting

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. 15**. 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 rod to join the two arms together, **Fig. 16**. 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.
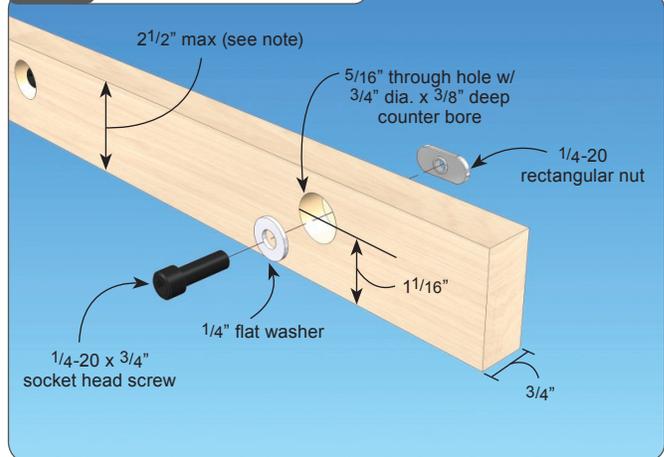
By placing one of the shorter 1-1/2" rods in each of the two stop arms, you can use the two stop arms independently, **Fig. 17**. For example, you can calibrate one for work to the left of the blade and the other for work to the right. On one side of the blade you might want to position the stop rods 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.

Fig. 14B Setting Scales for Angled Cuts

Slide scale to read cut length here

Measure length of cut

Fig. 15 Micro Adjusting

Loosen (2) socket head screws

Turn this socket head screw to adjust

Fig. 16 Long Stop Rod

Long stop rod used to join flip arms

Fig. 17 Short Stop Rods

Short stop rods allow independent flip arm use

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. 18**. 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".

Fig. 18 **Making a Sub Fence**

2 1/2" max (see note)

5/16" through hole w/ 3/4" dia. x 3/8" deep counter bore

1/4-20 rectangular nut

1/4" flat washer
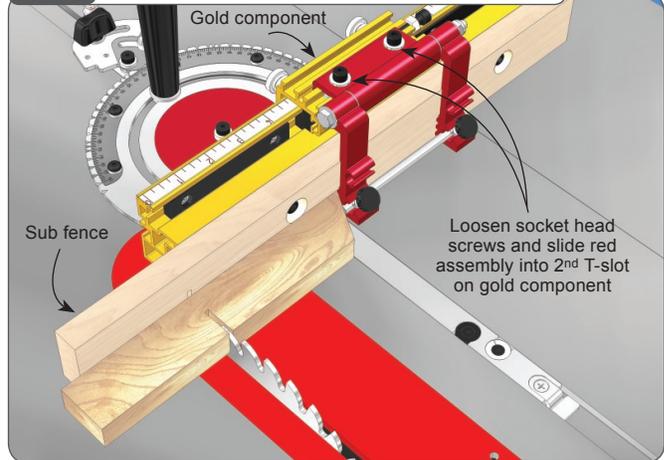
1 1/16"

1/4-20 x 3/4" socket head screw

3/4"

💡 **TIP**

To avoid the saw blade pulling your workpiece 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.19**.
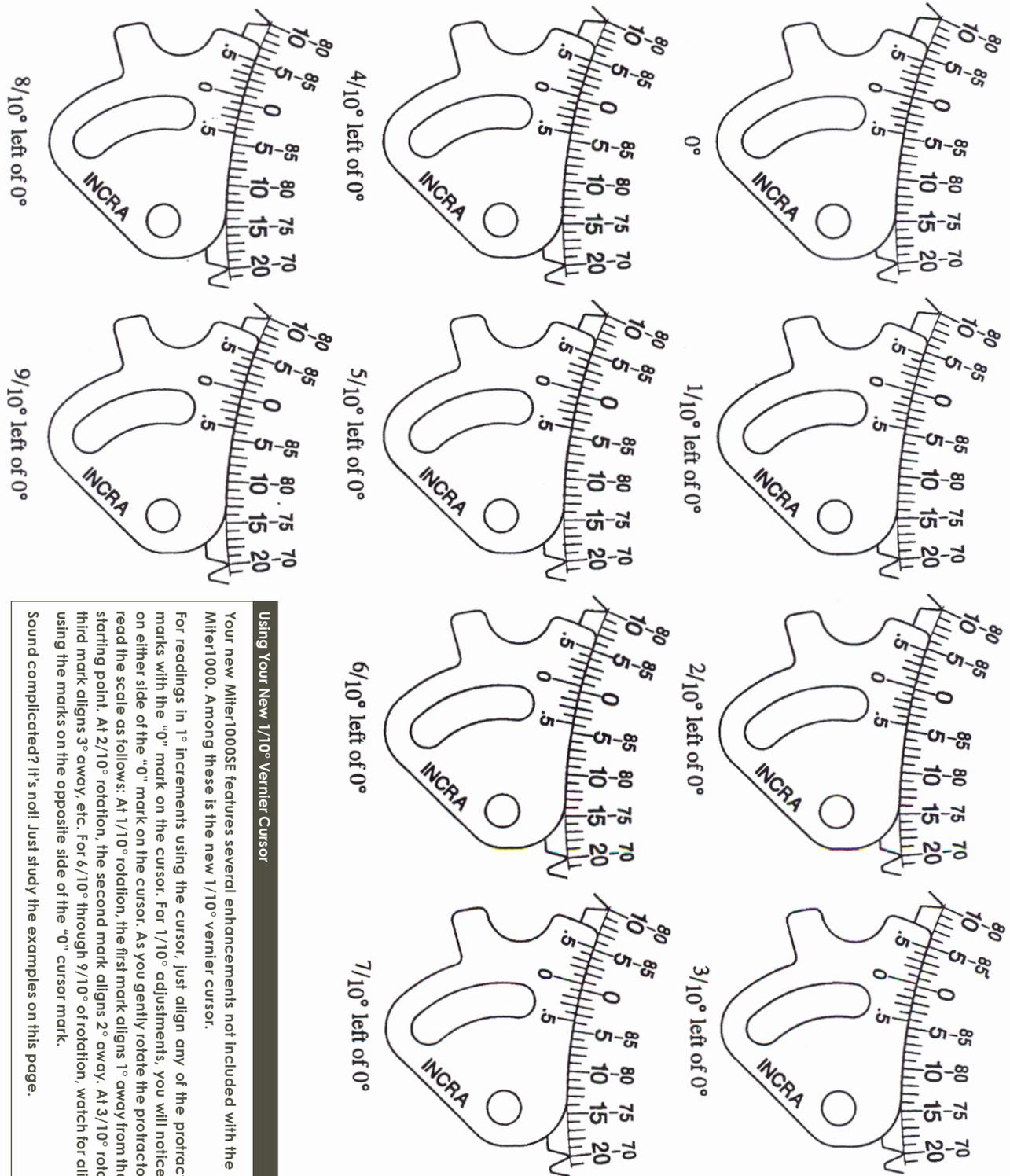
Fig. 19 **Expanded Flip Stop Clamping Mode**

Gold component

Sub fence

Loosen socket head screws and slide red assembly into 2nd T-slot on gold component

WARRANTY

8/10° left of 0°

4/10° left of 0°

0°

9/10° left of 0°

5/10° left of 0°

1/10° left of 0°

6/10° left of 0°

2/10° left of 0°

7/10° left of 0°

3/10° left of 0°

Using Your New 1/10° Vernier Cursor

Your new Miter1000SE features several enhancements not included with the standard Miter1000. Among these is the new 1/10° vernier cursor.

For readings in 1° increments using the cursor, just align any of the protractor scale marks with the "0" mark on the cursor. For 1/10° adjustments, you will notice 5 marks on either side of the "0" mark on the cursor. As you gently rotate the protractor you will read the scale as follows: At 1/10° rotation, the first mark aligns 1° away from the original starting point. At 2/10° rotation, the second mark aligns 2° away. At 3/10° rotation, the third mark aligns 3° away. For 6/10° through 9/10° of rotation, watch for alignments using the marks on the opposite side of the "0" cursor mark.

Sound complicated? It's not! Just study the examples on this page.

Manufactured by:

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USA