

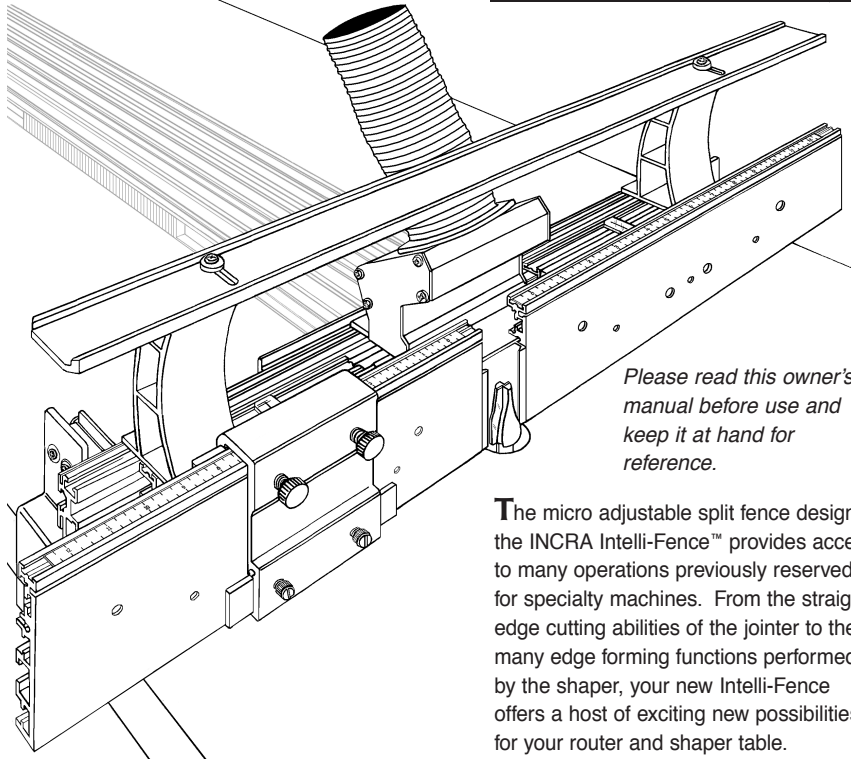
**From the makers of  
INCRA JIG!**

- Split fence design
- Micro adjustable
- Universal dust collection port
- Adjustable fence gap
- Compatible with all INCRA joint-making accessories

# Incra® Intelli-Fence

## All-Purpose Router Table Fence

### OWNER'S MANUAL



*Please read this owner's manual before use and keep it at hand for reference.*

The micro adjustable split fence design of the INCRA Intelli-Fence™ provides access to many operations previously reserved for specialty machines. From the straight edge cutting abilities of the jointer to the many edge forming functions performed by the shaper, your new Intelli-Fence offers a host of exciting new possibilities for your router and shaper table.

It all starts with intelligent design features. The opposing wedge design of the infeed/outfeed offset mechanisms permits very fine continuous adjustment of the fence offset from zero to 1/8", and each offset mechanism has its own hairline cursor and scale marked off in 2/1000 of an inch increments. Position the fences "in-line" for typical router table fence operations, and with the included table clamps, you can use the Intelli-Fence in the freestanding mode. Or, you can mount it directly to your INCRA Jig Ultra or Pro for the ultimate router table fence setup. It's completely compatible with all INCRA joint-making accessories. The unique Hi-Rise™ fence cap and an adjustable fence opening take the hassle out of working with large panels and large router bits for panel raising operations. All these features combined with the patented INCRA Stop and a universal dust collection port make the INCRA Intelli-Fence the intelligent choice for your router or shaper table.

## CONTENTS

<b>Assembly</b> .....	2
<b>Mounting to your Router Table</b> .....	3
Attaching to your INCRA Jig .....	3
Freestanding Mode .....	3
<b>Operation</b> .....	4
Offset Adjustment .....	4
Gap Adjustment .....	5
Initial Fence and Scale Setup .....	5
Fence Bridge Adjustment .....	6
INCRA Stop .....	6
<b>In-line Fence Applications</b> .....	6
Vertical Panel Raising .....	6
Joint Making .....	7
<b>Offset Fence Applications</b> .....	7
Joining .....	7
Shaping .....	8
<b>Product Information</b> .....	8
<b>Warranty</b> .....	8

## SAFETY

*Important safety instructions for using the INCRA Intelli-Fence:*

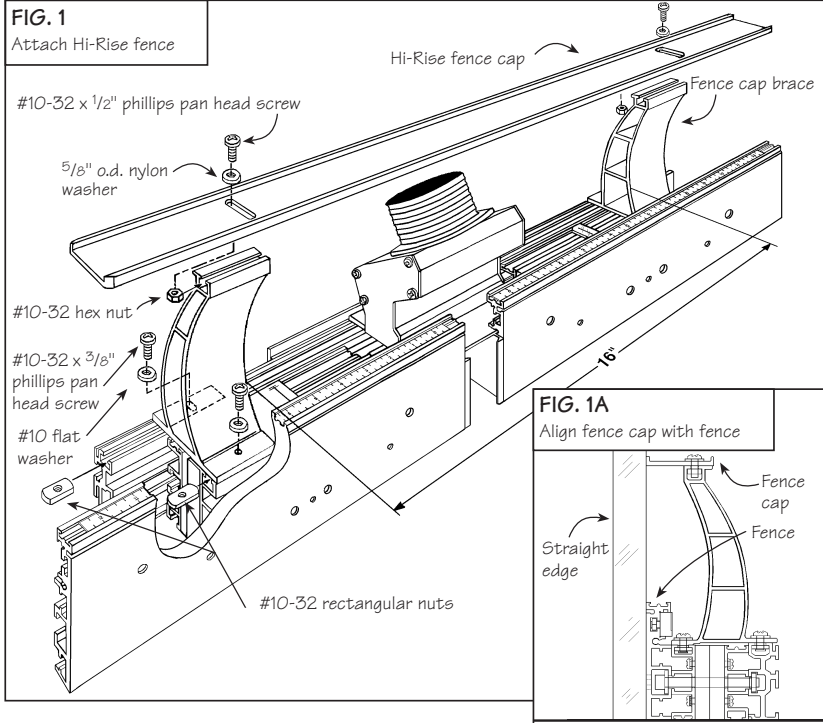
- Before using the INCRA Intelli-Fence, read and follow all of the instructions and safety information in this manual.
- When using the INCRA Intelli-Fence in conjunction with any other tool, first read and follow all instructions and safety information in that tool's owner's manual.
- Use appropriate safety devices. Always use a push stick, rubber soled push block, or other safety devices to keep your hands safely away from the cutting tool.
- When used in the freestanding mode with the supplied table clamps, always make sure the clamping knobs are tightened securely in place before making any cuts.
- If attaching the INCRA Intelli-Fence to your INCRA Jig Ultra or Pro, always make sure the carriage clamp on the INCRA Jig is in the locked position and the base is held securely in place before making any cuts.
- Always turn off the power and make sure that the router bit has come to a complete stop before changing the setting of any part of the INCRA Intelli-Fence or INCRA Stop.
- When adjusting the fence opening, never position the infeed or outfeed fence ends closer than 1/8" from the router bit.
- After making adjustments to the fence positions, be sure to tighten the two socket head cap screws through the large holes in both the infeed and outfeed fences.
- When using fence settings in which the router bit is partially recessed in the fence opening, always insure that the bit is centered within the opening.
- Never let the router bit come into contact with the aluminum body of the INCRA Intelli-Fence or INCRA Stop.
- Whenever using large diameter vertical or horizontal panel raising bits or any other large diameter bit, always follow that router bit manufacturer's operation and safety recommendations.
- Whenever it is necessary to remove large amounts of stock, always use multiple side by side passes to achieve the final cut. Several shallow cuts are safer and will yield better results.

# ASSEMBLY

## 1 Attach Hi-Rise fence cap

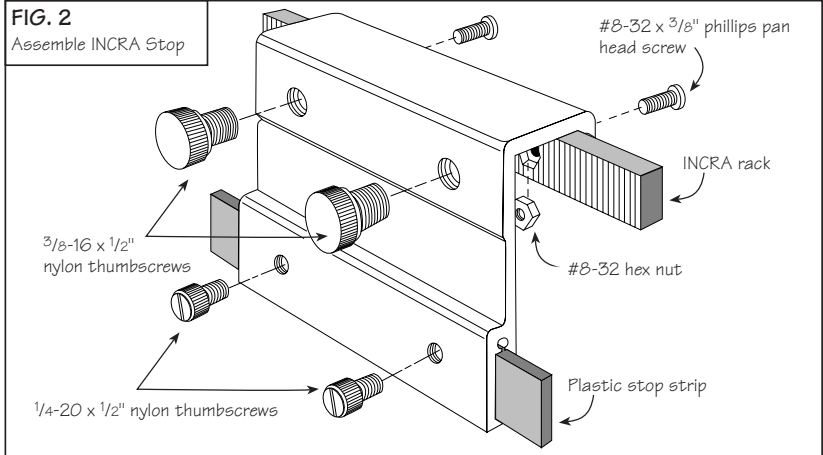
Attach the two Hi-Rise fence cap braces using (2) #10-32 x 3/8" phillips pan head screws, #10 washers and #10-32 rectangular nuts. See Fig. 1. Loosely attach the rectangular nuts to the screws then slide the nuts into the two T-slots provided. See Fig 1A. The two braces should be approximately centered on the length of the fences and spaced 16" apart.

Using the (2) #10-32 x 1/2" phillips pan head screws, 5/8" o.d. nylon washers, and #10-32 hex nuts, attach the Hi-Rise fence cap to the two braces as shown in Fig. 1 The slotted holes in the fence cap should be aligned to provide access through the slots to the front brace mounting screws. Use a straight edge to align the leading edge of the fence cap with the front face of the infeed and outfeed fences and tighten the two cap mounting screws, Fig. 1A.



## 2 Assemble INCRA Stop

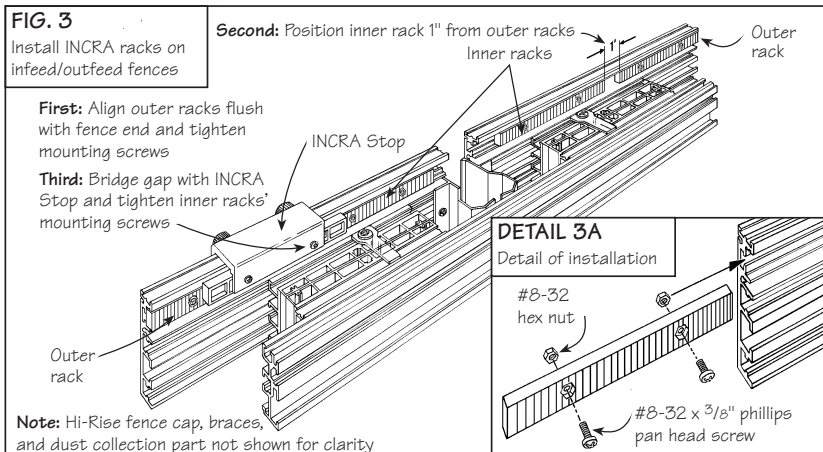
Using the (2) #8-32 x 3/8" phillips pan head screws and #8-32 hex nuts, fasten one of the blue INCRA racks to the INCRA Stop and tighten the screws. See Fig. 2. Slide the 3/4" x 5" plastic strip into the slot in the stop and secure with two 1/4-20 x 1/2" nylon thumbscrews. Thread the (2) 3/8-16 x 1/2" nylon thumbscrews into the INCRA Stop as shown. One or both of these thumbscrews can be used to clamp the INCRA Stop to the fence. In use, the plastic strip provides a non-metallic stop surface which can be shaped for special stop setups and can be micro adjusted by loosening the smaller thumbscrews.



## 3 Install INCRA racks on infeed/outfeed fences

Insert the #8-32 x 3/8" phillips pan head screws through the blue INCRA racks as shown in Detail 3A and loosely attach the #8-32 hex nuts. Slide the hex nuts on the racks into the small T-slots on the back of each infeed/outfeed fence. Place two racks on each fence. Position the outer racks flush with the fence ends and tighten the mounting screws. Loosely position each of the inner racks about 1" from the ends of the outer racks. Now clamp the INCRA Stop to the infeed fence so that it bridges the gap between the inner and outer racks and tighten the inner racks' mounting screws. Repeat for the outfeed fence. This bridging process aligns the inner and outer racks with one another for accurate INCRA Stop operation.

**Caution:** Tighten both screws on each rack.



## MOUNTING TO YOUR ROUTER TABLE

Your new INCRA Intelli-Fence can be used either by clamping directly to your router table or by attaching first to your INCRA Jig Ultra or Pro. Mounting directly to your INCRA Jig adds incremental positioning

control to the already substantial features of your INCRA Intelli-Fence. However, if you don't already own an INCRA Jig or you just prefer to use the Intelli-Fence independent of your

INCRA Jig system, the supplied clamps and instructions below will allow you to quickly set up and use the Intelli-Fence in the freestanding mode.

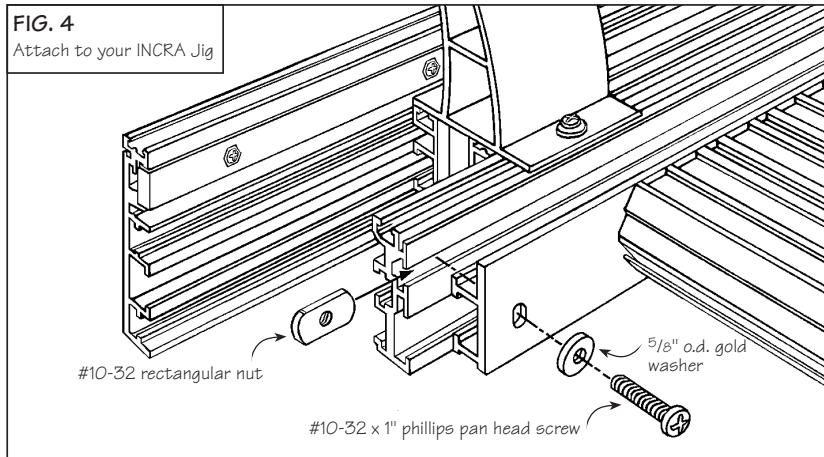
### Attaching to your INCRA Jig Ultra or Pro

**Important:** Your INCRA Jig Ultra or Pro must be mounted to a  $\frac{3}{4}$ " plywood base and the carriage clamp must be in the locked position before installing the Intelli-Fence.

Insert the supplied #10-32 x 1" phillips pan head screws through the  $\frac{5}{8}$ " o.d. (gold) washers then through the holes on the back of the INCRA Jig Ultra's fence mounting bracket. Loosely attach the (2) #10-32 rectangular nuts. Now slide the rectangular nuts into the T-slot on the rear of the Intelli-Fence. Position the fence so that the INCRA Jig's carriage is approximately centered on the fence length and tighten the two mounting screws.

**Note:** For mounting to the INCRA Jig Pro use the shorter #10-32 x  $\frac{1}{2}$ " screws.

FIG. 4  
Attach to your INCRA Jig



### Freestanding Mode

#### 1 Assemble table clamps

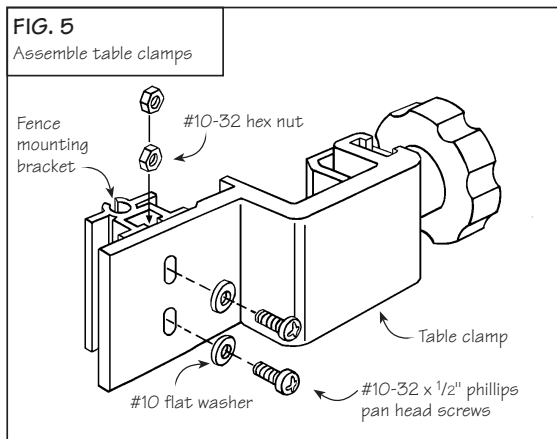
With the table clamps on a flat surface, insert the (2) #10-32 x  $\frac{1}{2}$ " phillips pan head screws through the #10 flat washers then through the holes in the clamp and loosely attach the (2) #10-32 hex nuts. See Fig. 5. Slide the hex nuts into the T-slot in the fence mounting bracket and tighten the screws. The ends of the fence mounting bracket should be flush with the clamp edges. Repeat for the other clamp.

#### 2 Attach table clamps to Intelli-Fence

Position the Intelli-Fence on your router table with the opening in the fence centered on your router's collet. Insert the  $\frac{1}{4}$ -20 x 2" socket head cap screws through the  $\frac{1}{4}$ " washers then through the fence mounting bracket and loosely attach the  $\frac{1}{4}$ -20 rectangular nuts. Now slide the rectangular nuts into the T-slots on the rear of the Intelli-Fence. Tighten the clamping knobs to secure the clamps to the table edge, then tighten the two socket head cap screws using the supplied hex key, Fig. 6.

**Note:** The table clamps are designed to work on router tables from  $\frac{1}{8}$ " to  $\frac{13}{8}$ " thick. To increase the thickness of a table less than  $\frac{1}{8}$ " thick, use double faced tape or glue to attach a wooden strip to the underside of the table edge.

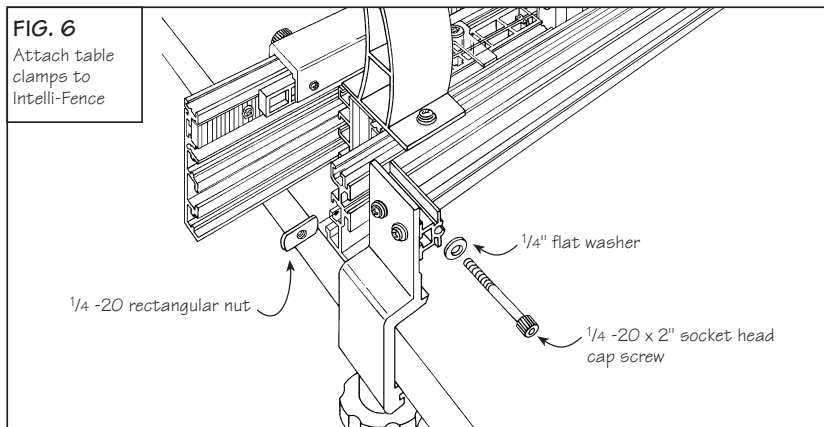
FIG. 5  
Assemble table clamps



**TIP**

By loosening the two phillips head screws on the table clamps the fence angle can be adjusted perfectly square to your router table.

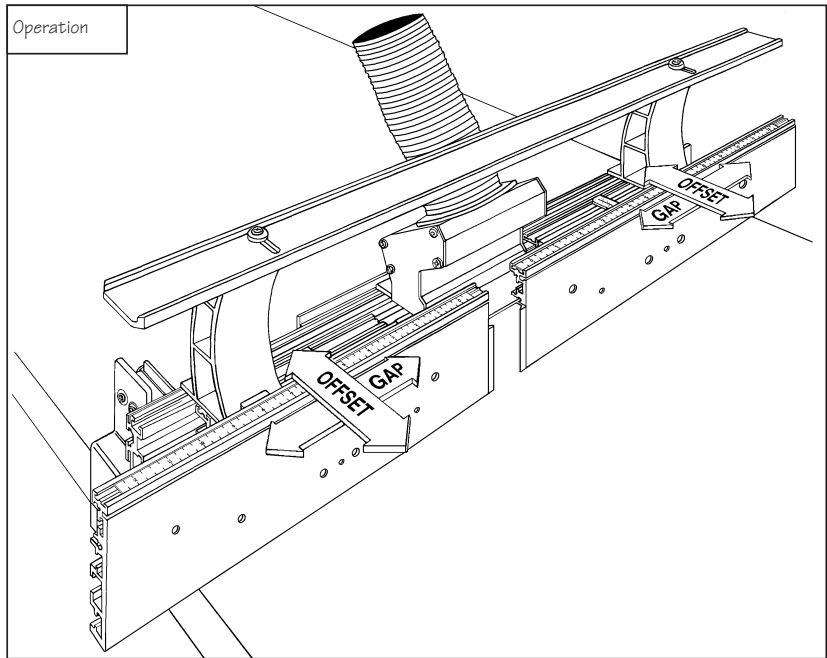
FIG. 6  
Attach table clamps to Intelli-Fence



## OPERATION

The infeed and outfeed fences of the Intelli-Fence can be moved independently in two directions to provide a variety of setup configurations. By making the *offset adjustments* described below, you can position the fences “in-line” for standard routing operations such as grooving, rabbeting, and joint making, or you can “offset” the infeed and outfeed fences for specialty cutting applications such as shaping or jointing an edge. The *gap adjustment* allows adjustment of the opening between the infeed and outfeed fences from 5/8" to 33/4". Follow the step by step instructions below to familiarize yourself with these two basic adjustments, then do the initial fence and scale setup described on page 5 and you'll be ready to put your new Intelli-Fence to work.

**Caution:** Always turn off the power and make sure the router bit has come to a complete stop before changing the setting of any part of the Intelli-Fence.



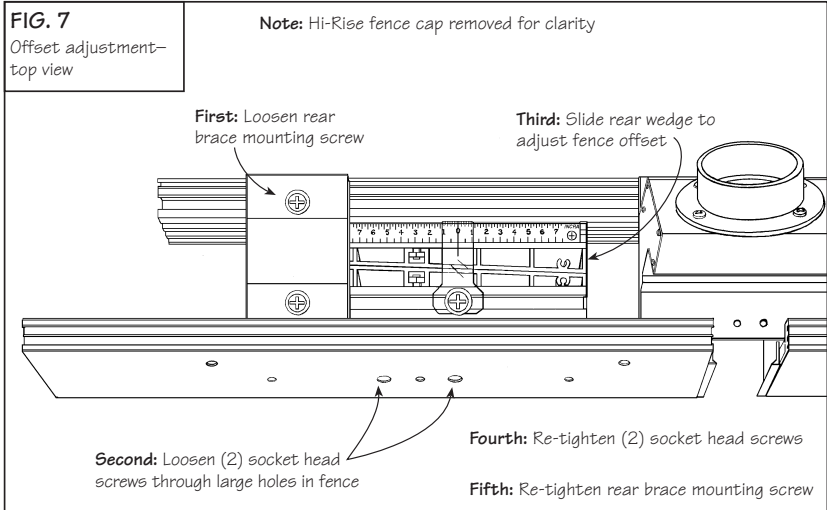
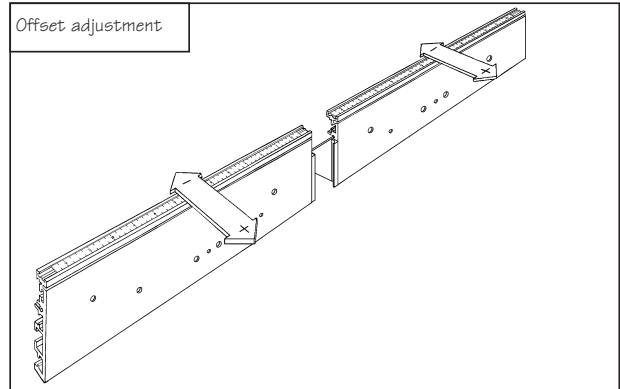
## Offset Adjustment

Follow these steps to adjust either the infeed or outfeed fence for “in-line” or “offset” fence applications, see Fig 7:

- 1** Loosen the rear mounting screws on the Hi-Rise fence brace.
- 2** Using the supplied hex key, loosen the two socket head screws through the large holes in the fence. Loosen each screw one to two full turns, depending on the amount of adjustment range needed.
- 3** Adjust the fence by sliding the rear wedge:
  - (+) to move the fence forward, slide the wedge to the left to move the (+) end of the scale toward the hairline cursor.
  - (-) To move the fence backward, slide the wedge to the right to move the (-) end of the scale toward the hairline cursor.

**Note:** The numbers on the scale represent hundredths of an inch. Each of the smaller tick marks on the top of the scale represent .002" (two thousandths of an inch).

- 4** Tighten the two socket head screws through the large holes in the fence.
- 5** Tighten the rear mounting screw on the Hi-Rise fence brace.



## Gap Adjustment

Follow these steps to adjust the opening between the infeed and outfeed fences, see Fig. 8:

**Caution:** When adjusting the fence opening, never position the fence ends closer than 1/8" from the router bit.

**1** Loosen the front mounting screw on the Hi-Rise fence brace. You can either use a long shank phillips screw driver to access the screw through the slotted opening in the red fence cap or simply loosen the fence cap retaining screws and pivot the fence cap to provide access to the front fence brace screw.

**2** Using the supplied hex key, loosen the two socket head cap screws through the large holes in the outfeed fence.

**3** Note the scale setting, then hold the front and rear wedges together as you slide the outfeed fence to open or close the gap.

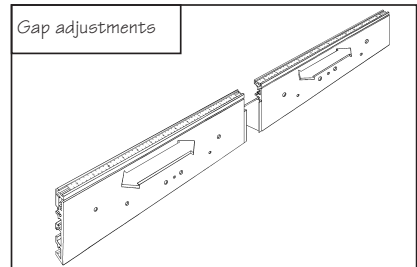
**4** Make sure the scale setting is still the same (slide the rear wedge to adjust if necessary) then tighten the two socket head screws through the large holes in the fence.

**5** Tighten the front screws on the Hi-Rise fence brace.

**6** Align and tighten the Hi-Rise fence cap if it was moved to access the fence brace screws (see Fig. 1A, page 2).

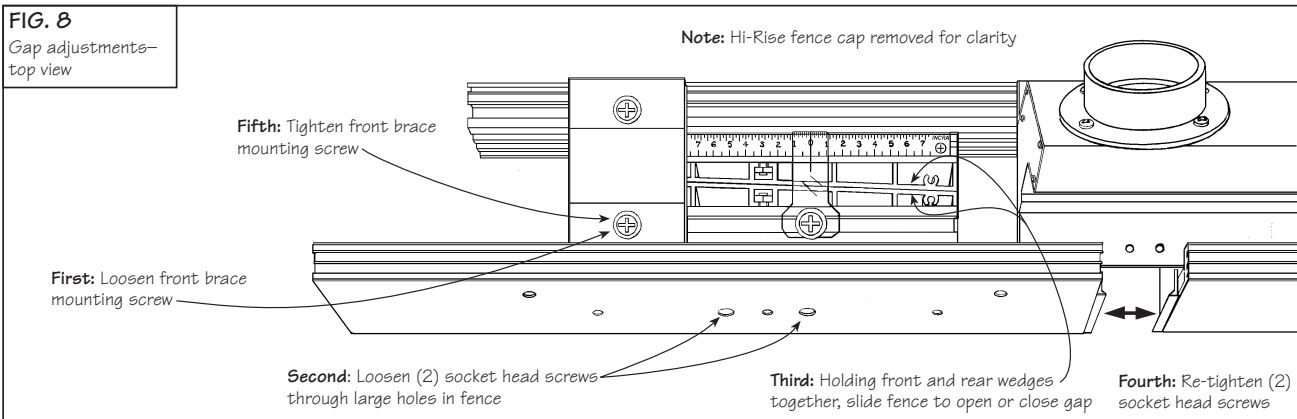
**7** Repeat Steps 1-6 for the infeed fence.

**TIP** To avoid accidentally changing the fence offset, it is usually best to begin in any Intelli-Fence setup by making the fence gap adjustment before setting the fence offset.



**FIG. 8**

Gap adjustments—top view



## Initial Fence and Scale Setup (In-line/mid-range position)

In order to position the scales for accurate readout, the infeed/outfeed fences must first be positioned in-line with one another with the adjustment wedges at mid-range. Once the scales are positioned you'll easily be able to return the infeed/outfeed fences to this in-line/mid-range position for standard in-line fence applications. You'll also find the in-line/mid-range position a good starting point for any of the offset fence applications. Here's how, see Fig 9:

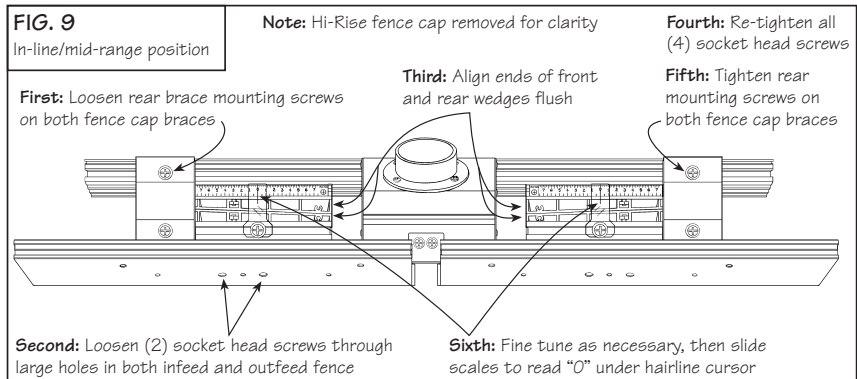
**1** Loosen the rear mounting screws on both Hi-Rise fence braces.

**2** Loosen the two socket head screws through the large holes in both the infeed and outfeed fence.

**3** Slide the rear wedge on each fence to align the ends of the rear wedge flush with the ends of the front wedge.

**FIG. 9**

In-line/mid-range position



**4** Tighten the two socket head screws through the large holes in both the infeed and outfeed fence.

**5** Tighten the rear mounting screws on each of the Hi-Rise braces.

**6** Test the in-line setup by sliding a straight edged board down the

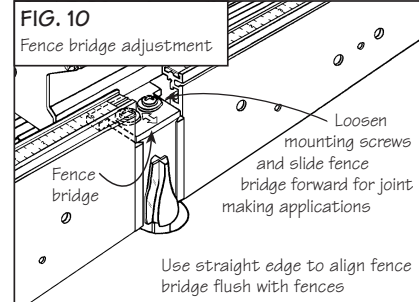
length of the fences. Fine-tune either the infeed or outfeed fence as necessary.

**7** Once the fences are located in line with one another slide the infeed and outfeed scales to read "0" under the hairline cursors.

## Fence Bridge Adjustment

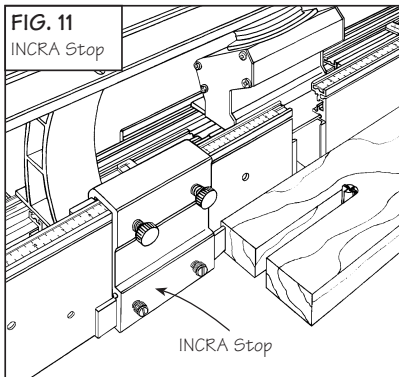
The adjustable fence bridge is used during joint making to provide support for narrow vertically held stock as it is moved past the opening between the infeed and outfeed fences. For all other cutting operations the fence bridge can be positioned behind the front face of the Intelli-Fence and tightened in place. For use during joint making, first return the fences to the in-line/mid-range

position described above. Loosen the screws that secure the fence bridge and slide it forward into the opening between the fences. Adjust the fence gap as described on page 5 to close the fence ends on the bridge. Now use a straight edge to locate the fence bridge flush with the front face of the fence and tighten the mounting screws. See Fig 10.



## INCRA Stop

When used in conjunction with your new INCRA Intelli-Fence, the INCRA Stop provides the same precise rack positioning capabilities that made the INCRA Jig famous. The sliding scale in the top of the fence becomes a versatile reference for use in setting stop positions at the router table. The adjustable plastic stop permits micro adjusting of the stop positions anywhere between the 1/32" tooth spacing on the INCRA racks. The bi-directional design allows the INCRA Stop to function on the infeed or outfeed end of the fence with any thickness of stock.



**TIP** The fence bridge can be mounted with either the narrow or wide end in the opening between the infeed and outfeed fences. With the narrow end forward the fence opening will be 5/8". This opening is great for smaller joint making bits like the 1/4" and 3/8" straight or the 1/4", 5/16", and 3/8" dovetails. With the wider end of the fence bridge forward the opening is increased to 1 1/8", perfect for use with larger dovetail bits.

## IN-LINE FENCE APPLICATIONS

Once set to the in-line/mid-range position as described on page 5, your new INCRA Intelli-Fence can be used for a variety of typical in-line fence applications, including grooving, dadoing, and edge forming operations

such as rabbeting, chamfering, and roundovers. You'll also find the in-line position useful for many specialty operations. With the Hi-Rise fence cap, you'll be able to use vertical panel raising bits to make raised panels for

cabinetry, and since its design is compatible with all INCRA joint-making accessories, you'll be able to use the Intelli-Fence in conjunction with your INCRA Jig Ultra or Pro as a joint-making fence.

## Vertical Panel Raising

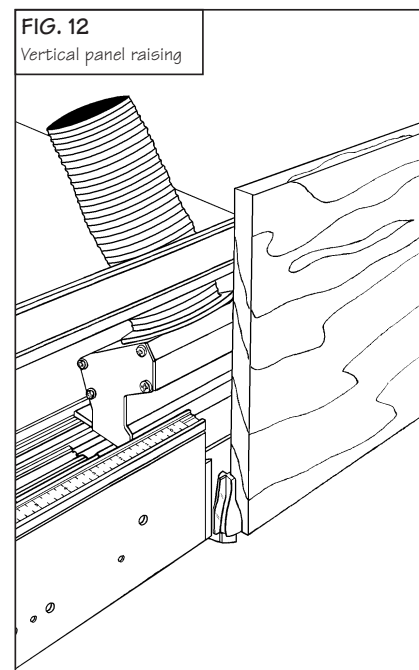
The introduction of the vertical panel raising bit has made cutting the reveal on a raised panel a relatively simple operation for the router table. You'll find your new Intelli-Fence, with its built-in dust collection, adjustable fence gap, and Hi-Rise fence cap, perfect for this operation. The setup is as follows, Fig 12:

- 1** Install vertical panel raising bit and set appropriate depth of cut.
- 2** Adjust fence gap as necessary (see Gap Adjustment on page 5).

**3** Adjust infeed/outfeed fences to the in-line/mid-range position as described on page 5.

**4** Use a straight edge to adjust the Hi-Rise fence cap in line with the infeed and outfeed fences. (See Fig. 1A on page 2.)

**5** Remember: Do not make the full width of the cut in a single pass. Instead, use several light side-by-side passes, moving the fence back 1/16" or so after each pass.



## SAFETY

□ Whenever using large diameter vertical or horizontal panel raising bits or any other large diameter bit, always follow that router bit manufacturer's operation and safety recommendations.

□ Whenever it is necessary to remove large amounts of stock, always use multiple side-by-side passes to achieve the final cut. Several shallow cuts are safer and will yield better results.

## Joint Making (INCRA Jig Ultra or Pro required)

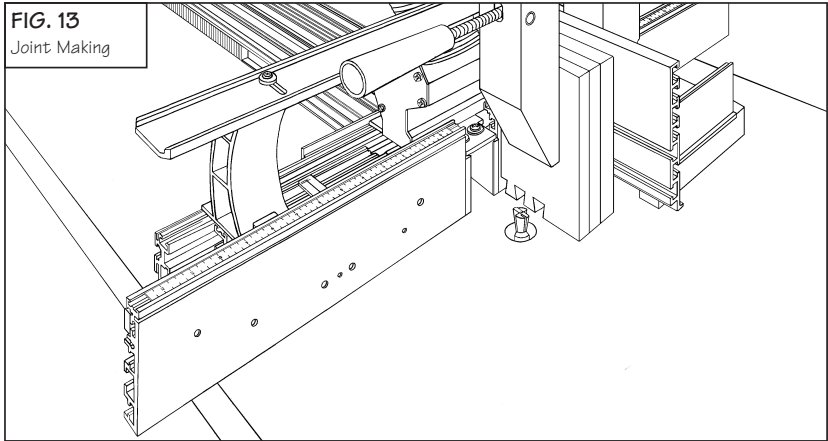
Adding an INCRA Jig Ultra or Pro to your Intelli-Fence makes precise placement of multiple side-by-side cuts a cinch. One such operation requiring this kind of precision is joint making. Once placed in the in-line/mid-range position, your new Intelli-Fence becomes a perfect replacement for the standard straight fence commonly used with the INCRA Jig. It is completely compatible with all of the INCRA joint-making accessories, including the INCRA Right Angle Fixture, Stop, and joinery templates. The setup follows, see Fig 13:

- 1** Adjust infeed/outfeed fences to the in-line/mid-range position as described on page 5.
- 2** Position fence bridge and adjust fence gap as described on page 6.
- 3** Follow the instructions for the joint you wish to cut as detailed in the INCRA Master Reference Guide and Template Library.

**TIP**

Clearance is provided for between the Hi-Rise fence cap, the braces and all INCRA joint-making accessories. However, since the Hi-Rise fence cap and braces are not necessary for joinery, you may remove them from the Intelli-Fence if you prefer. Just reverse the assembly instructions described on page 2.

FIG. 13  
Joint Making



## OFFSET FENCE APPLICATIONS

One of the most valuable features of the Intelli-Fence is the ability to offset the infeed and outfeed fences. The offset fence adds a whole new dimension to the router table, allowing it to perform two new operations—jointing, and shaping.

### Jointing

Most woodworking projects require that your boards begin with at least one straight edge. This one straight edge then becomes the reference surface for subsequent perpendicular or parallel cuts. By using your Intelli-Fence and the technique described below, you'll be able to put a perfectly straight edge on your board at the router table and, because of the higher RPM of the router, you'll find the freshly jointed edge far smoother than any jointer machine can produce.

- 1** Install a 1/2" diameter (or larger) straight bit and set the depth of cut to slightly greater than the thickness of stock to be jointed.
- 2** Adjust fence gap as necessary (see Gap Adjustment on page 5).
- 3** Adjust infeed/outfeed fences to the in-line/mid-range position as described on page 5.
- 4** Adjust the location of the Intelli-Fence at your router table to place the outfeed fence in line with the outermost cutting arc of the router bit. (A straight edge placed against the outfeed fence can be used to help align the fence with the cutter.) Fig. 15.
- 5** Micro adjust the infeed fence backward (-). The reading on the scale will represent the amount of stock you wish to remove from the board's edge on each pass. A light cut (infeed cursor reading between -1 and -2) will yield the smoothest results.

FIG. 14  
Jointing

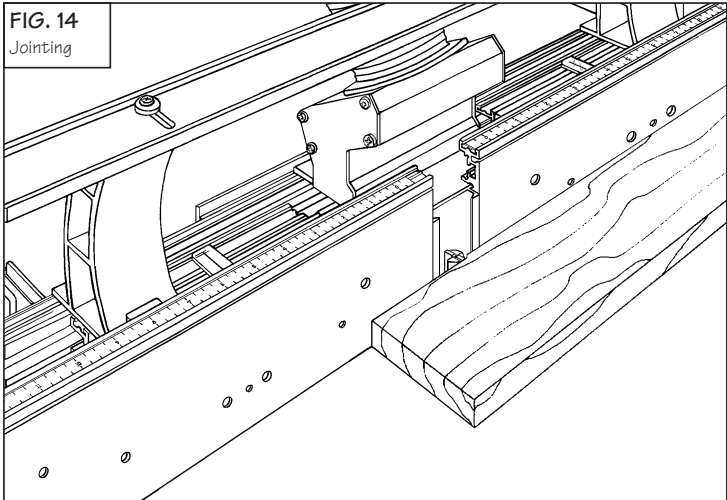
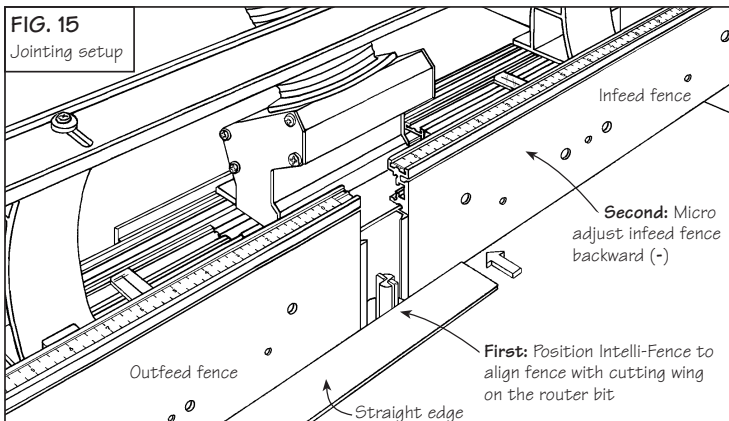


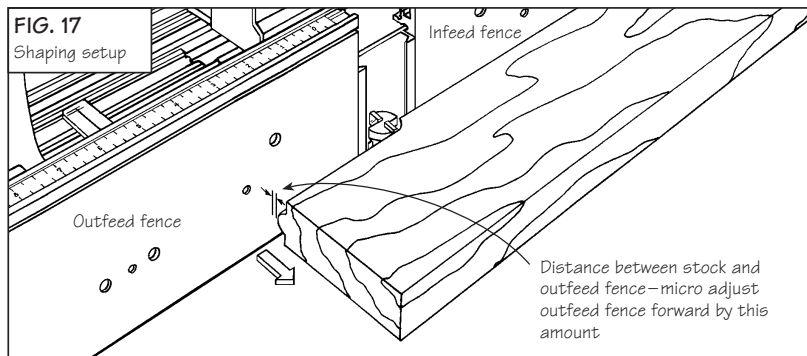
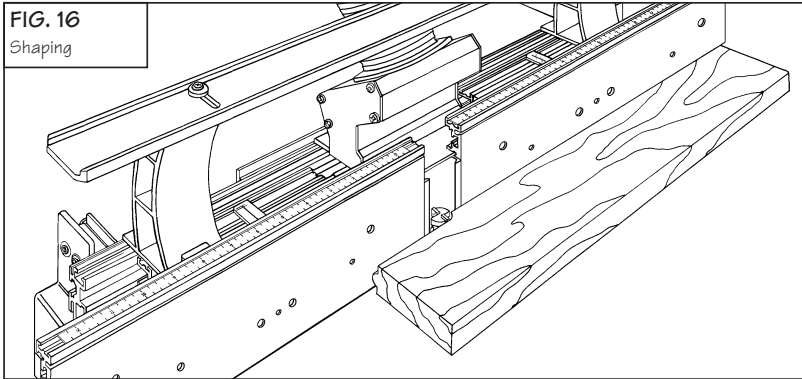
FIG. 15  
Jointing setup



## Shaping

Many shaping operations involve the removal of the entire edge of a square piece of stock as it is moved past the cutter. Once the stock is removed from the edge, it becomes necessary to support the freshly cut surface by moving the outfeed fence forward. Although similar to jointing, the setup is slightly different. Here's how:

- 1** Install router bit and set desired depth of cut.
- 2** Adjust fence gap as necessary (see Gap Adjustment on page 5).
- 3** Adjust infeed/outfeed fences to the in-line/mid-range position as described on page 5.
- 4** Adjust the location of the Intelli-Fence at your router table to achieve the desired cut profile. Use a scrap piece of wood and make trial cuts to help in determining the fence position.
- 5** Make a fresh test cut about 3" long on a piece of scrap stock, then turn off the router. You'll notice a gap between the freshly cut surface and the outfeed fence, Fig. 17. Simply micro adjust the outfeed fence forward by this amount to support the stock's edge as it passes the cutter.



## PRODUCT INFORMATION

For a product information update on the complete INCRA line of tools, please see your nearest dealer. If you are unable to locate a store nearby, or if you have trouble finding a particular product, we will honor your order directly.

For a product information brochure, call, write or fax to:  
**Taylor Design Group, Inc.**  
P.O. Box 810262, Dallas, Texas 75381  
P: 972-242-9975 Fax: 972-242-9985  
[www.incra.com](http://www.incra.com)

## WARRANTY

Taylor Design Group, Inc. warrants this product for one year from date of purchase. We will repair any defects due to faulty material or workmanship, or at our option, replace the product free of charge. Please return the failing component only, postage prepaid, along with a description of the problem to the address below. This warranty does not apply to parts which have been subjected to improper use, alteration, or abuse.

### LIFETIME WARRANTY ON POSITIONING RACKS

If an INCRA positioning rack in this tool becomes damaged for ANY reason, Taylor Design Group will replace it free of charge for as long as you own your tool. Return the damaged rack, postage prepaid, and allow 1 to 2 weeks for delivery.

#### NOTE:

Replacements cannot be sent unless damaged racks have been received by Taylor Design Group.

#### Made in America by:

Taylor Design Group, Inc. ■ P.O. Box 810262 ■ Dallas, Texas 75381

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