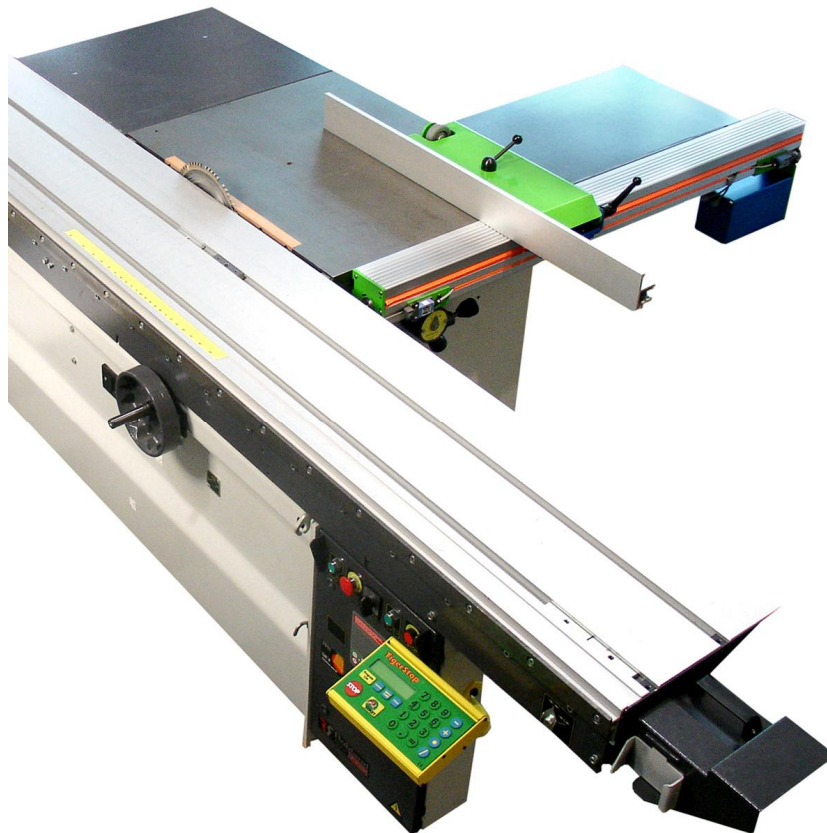



TigerFence®

Installation & Basic Setup

November 2005



Dog won't hunt till you enable it!



This machine will NOT function until it's enabled!
Enable your TigerStop between the hours of 7 am and 4 pm PST Monday to Friday.
The warranty period doesn't begin until you enable your TigerStop. To enable your TigerStop, complete the warranty registration form **INSIDE**.

IMPORTANT! TigerStop must be enabled with a code that must be obtained from TigerStop Customer Service.

If you will be installing your unit on a weekend or after business hours, be sure to get your enable code before 4 p.m. PST!

Contact information:

TigerStop LLC, Assembly Plant, 12909 NE 95th St., Vancouver, WA 98682

Tel: 360 254-0661 □ Fax: 360 260-0755 □ Website: www.tigerstop.com □ Email: service@tigerstop.com

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Register Your Warranty

1 When your new TigerStop arrives, you will find a warranty registration wrapped around the controller in the accessory box.



2 Fill out this form and fax it to TigerStop Customer Service at (360) 260-0755.

3 TigerStop Customer Service will contact you by return fax or by phone to give you the enable code, within the hour during *regular business hours*, (360) 254-0661 x238 Mon-Fri 7am~4pm PST (West Coast), service@tigerstop.com, or the next business day if faxed after 4:00 P.M.

4 When you get your enable code from TigerStop Customer Service, it's time to enable your TigerStop!

Your TigerStop warranty begins on the day that your TigerStop is enabled!

To enable your TigerStop...

1 Fill out the warranty registration form and fax it to TigerStop. Fax 360-260-0755.

TigerStop customer service will give you your machine's enable code.

2 Turn TigerStop ON . The switch is on the motor box .

3 The screen displays...



You will see the message "Enter enable code" on the top line of the LCD screen, which alternates with two other messages: "Call TigerStop," and the factory telephone number "(360) 254-0661." The serial number of your machine is constantly displayed on the bottom line of the screen. When you enter the enable code, it will REPLACE the serial number.

4 Enter the **enable code** and press  to load the code.

If the "Enter enable code" and the other messages stop blinking, the enable code has been successfully loaded (but not yet stored), so you can run the home routine. If the messages continue displaying on the top line of the screen, you have not entered the enable code correctly. Take a careful look at the enable code and re-enter it. If it still does not work, call TigerStop Customer Service.

If you encounter a home routine failure right after you have entered your enable code, the enable code will NOT have been stored, and it will have to be re-entered. TigerStop is not actually enabled until it has successfully run the home routine and stored the enable code.

TigerFence

Concept TigerFence is an automated replacement rip fence for table saws and sliders. TigerFence...

- ... consists of the fence beam and drive motor, the replacement rip fence and the controller with stand (Fig. 1).
- ... entirely replaces the existing rip fence and gauge.
- ... requires a vertical surface (saw top edge casting) at least 2.25" (57mm) high, and at least 4" (102mm) of clearance from the top of the saw to avoid conflict with saw controls.
- ... requires drilling holes in the saw casting for support hardware.

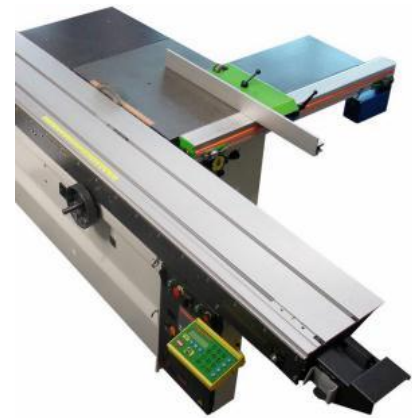


Fig. 1

TigerFence must be installed in accordance with all local, state, and federal regulations, as well as common sense safety requirements. Use only trained professionals when installing TigerFence with your existing saw to ensure a safe and proper work station that will in no way endanger the operator or any other personnel. Do not operate TigerFence without proper training.

Get your tools for installation ready

To install TigerFence you will need these tools (or equivalents):

- power drill/driver
- 3/8" carbide drill bit (for boring through the saw casting)
- 1/2" deep socket wrench & ratchet (for tightening mounting bolts)
- 9/16" combination wrench to adjust rip fence squareness
- 5/32" hex wrench (for control stand set screw)
- 7/16" socket wrench (use with power driver to turn drive screw)
- two sturdy C-clamps
- combination square
- TigerFence hole template (Fig. 2, NOT shown actual size) - Actual size 9" x 60" (23cm x 153cm)

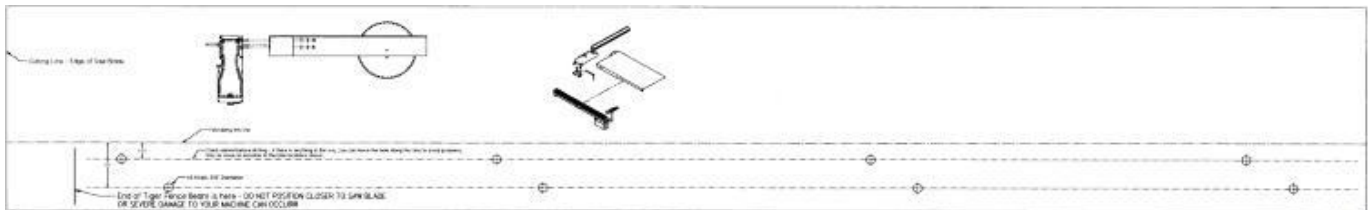


Fig. 2

Unpack TigerFence

TigerFence comes packed in a carton.

Carefully unpack it and make sure you have all the parts shown in Fig. 3.

Take special care NOT to throw away the paper template (Fig. 2) which must be used to position TigerFence accurately on your saw!

Basic TigerFence components

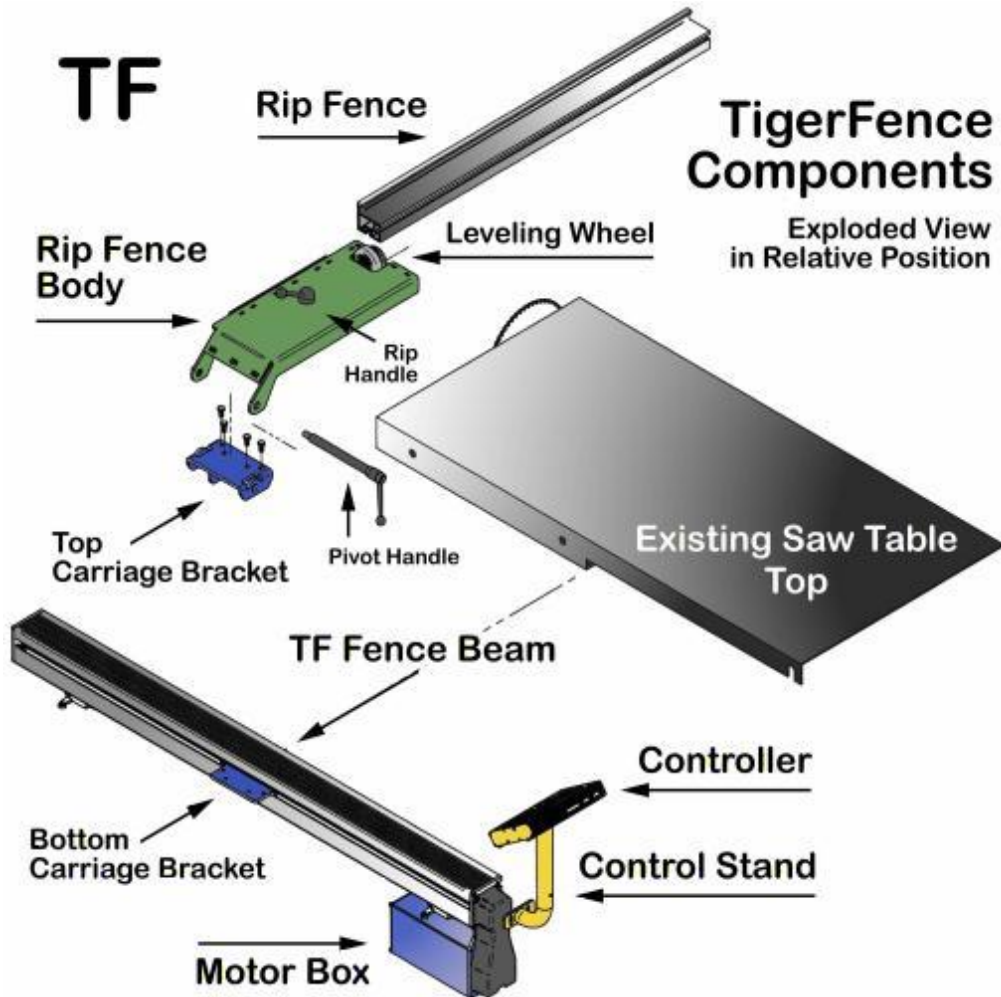


Fig. 3

➔ Turn OFF all power to the saw!

Remove your existing rip fence and guide bar

1. Push the sliding bed forward out of the way.
2. Remove the existing rip fence and guide bar.
3. Make sure that the front edge of the saw table is very smooth and clean. This is where TigerFence will be attached. Nothing should prevent a tight fit.

Drill the attachment holes in the saw casting

4. Use the provided hole template (Fig. 2) to locate the attachment holes. The hole template is printed on a piece of 9" x 60" paper. Fold the template at the line as shown (Fig. 4) and mark two holes on the front edge of the casting at the locations shown on the template.

It might not be possible to drill two holes at each location, depending on the height of the table edge. On some saws the top is too thick to use the top row of bolts, so use more bolts in the bottom row.

5. After marking the holes with the template, use a center punch to provide a start for your drill bit.

TigerFence Installation

6. Drill out all the holes with a 3/8" bit. The holes will not be tapped. Use a spray lubricant on the drill bit and in the hole to make the drilling easier. Keep a shop cloth on the floor and use it to catch over-spray from the lubricant, so you don't create a hazardous slick on the floor where you're working. After the holes are drilled, clean up the metal shavings removed by the drill.

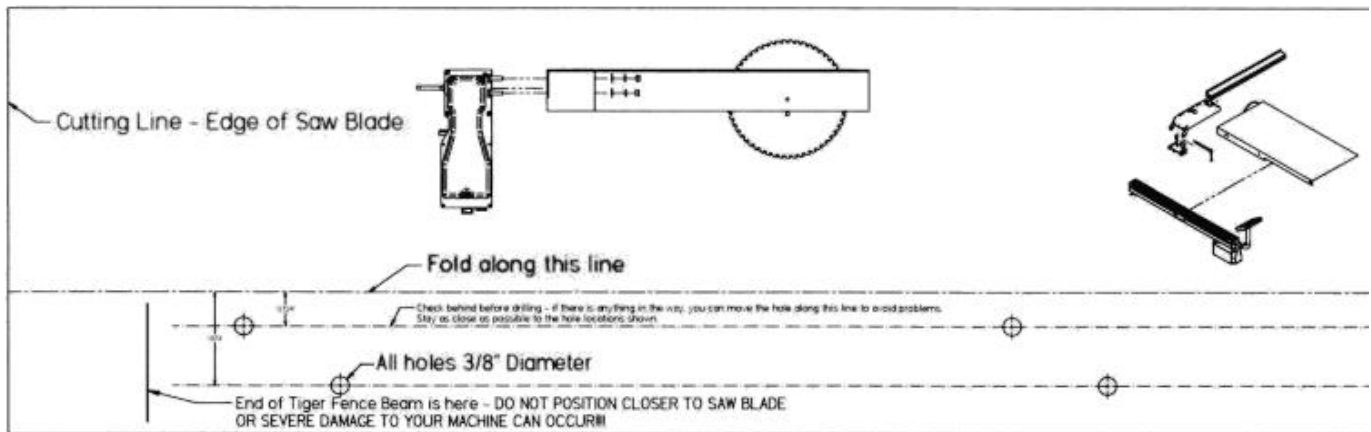


Fig. 4

Mount TigerFence to the saw (Method 1)

If you have enough room to the right of the saw to be able to slide TigerFence on to the mounting hardware, use Method 1. If the saw is too close to the wall or other machinery on the right to permit this, skip down to step 10 and use Method 2.

TigerFence is mounted to the front edge of the saw table through the holes you just bored using four pieces of hardware: T-bolt, flat washer, locking washer, and nut.



Fig. 5



Fig. 6

7. Insert a T-bolt into each hole. On the back side of the casting, thread on the flat washer, the locking washer and the nut (in that sequence).
8. Hand-tighten the fasteners until there is about 1/2" between the T-bolt head and the front of the casting. You may have to access the back side of the casting from inside the saw to tighten the fasteners.

Again, make sure all power to the saw is turned OFF before accessing the inside of the saw through an access panel.

9. With an assistant, pick up TigerFence with the motor hanging down at the right end of the fence beam and slide it on to the T-bolts. The T-bolts slide into the channels on the back face of the TigerFence beam (Fig. 5). Make sure the left end is on the mark you transferred from the template (Fig. 6). Hand-tighten all the fasteners. Continue at step 14.

Mount TigerFence to the saw (Method 2)

10. Lay TigerFence down on the saw table right above the front edge of the casting in which you drilled the mounting holes.
11. Slide one T-bolt into the upper and lower channels in the back of TigerFence (Fig. 5) for each of the hole locations.
12. With an assistant, flip TigerFence over and insert the T-bolts into each of the mounting holes.

This will locate TigerFence but will NOT support it!

13. Use heavy-duty C-clamps in two places to clamp TigerFence to the saw casting while you are threading on the flat washer, the lock washer and the nut (in that sequence) to each T-bolt. Because the T-bolts are already in the channels, hand tighten all the fasteners. Make sure the left end is on the mark you transferred from the template (Fig. 6).

Flush TigerFence to the saw table top

TigerFence should now be snugly attached to the saw and may also be quite flush with the saw top. However, the top of the TigerFence beam must be as absolutely flush with the table top as possible. Use a combination square to check for flushness.

TigerFence may deviate very slightly from the plane of the table top at its front edge, but the back edge of TigerFence where it meets the saw table should be precisely flush.

14. Make sure that the left end of TigerFence is flush with the saw table and firmly tighten the top T-bolt at the left end, with a 1/2" socket wrench. Now, you can use this as a pivot point in making sure the rest of TigerFence will be flush with the saw table along its length.
15. Make any adjustments to TigerFence to achieve perfect flushness to the table top, and firmly tighten each T-bolt from the back side of the casting using the 1/2" socket wrench.

Assemble the rip fence carriage

16. Remove the pivot handle from the blue carriage bracket.
17. Position the green rip fence body over the blue carriage bracket so both sides of the blue bracket are captured between the sides of the green rip fence body.
18. Reinsert the pivot handle, this time through both rip fence body and carriage bracket, and tighten it down (it is a ratchet handle) until the rip fence body can pivot up from its horizontal position with some resistance.

Do NOT over-tighten the pivot handle! There may be a bit of space between adjacent members of the blue bracket and green rip fence body.



Fig. 7



Fig. 8



Fig. 9

Square up the rip fence to the saw blade

19. Slide the aluminum rip fence on to the rip fence body and tighten using the rip handle (Fig. 7).
20. Loosen the four bolts on the blue carriage bracket (Fig. 8) with a 9/16" combination wrench.

The carriage bracket is actually composed of two pieces, the top connecting to the green rip fence body, the bottom connecting to the drive unit carriage. The four bolts join these two pieces and also permit the two pieces to be adjusted relative to each other for squaring the rip fence to the saw blade.

21. You can roughly align the rip fence to the saw blade by measuring from both ends of the rip fence to the edge of the sliding bed or, in the case of a standard table saw, to the slot for the miter gauge.
22. Tighten the four bolts firmly, and check for squareness by making a sample cut. It should be relatively close. If not, you can finish squaring the fence up later, with TigerFence powered ON, using the same method.


Please note that the upper left bolt is the pivot, while the other three bolts mount through slots to allow for adjustment.

Install the control stand and controller, and connect the power cord

23. Install the control stand in a location convenient for the saw operator. This will require drilling and tapping two holes in the body of the saw or an associated structure, such as an overhead guard support.
24. After mounting the control stand, load the controller on to it, and fasten it down securely.
25. Plug one end of the blue controller cable into the controller and the other end into the motor box (Fig. 9).

There is only one way to plug in the controller cable: the "male" end plugs into the controller, the "female" end plugs into the port on the side of the motor box.

26. Make sure the power switch is OFF, plug the female end of the power cord into the motor box, and fasten with the metal retainer clip (Fig. 9).

 **Do not run the controller cable next to power lines or along dust collection tubes!**

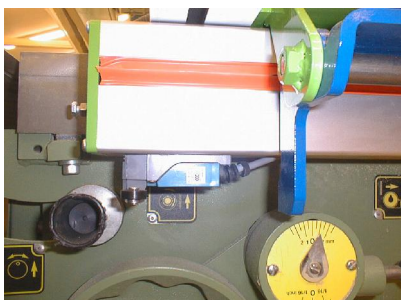


Fig. 10

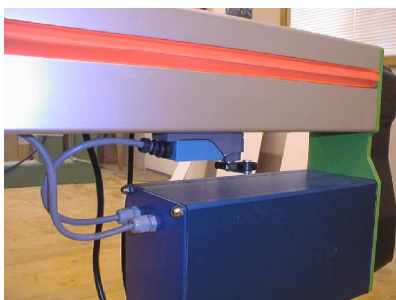



Fig. 11



Fig. 12

Re-position the end sensors to adjust the range of movement

Concept  TigerFence should be adjusted to ensure that the rip fence will not crash into the saw blade when running the **home routine**. This is done by moving the end sensors.

The bottom carriage bracket triggers the end sensor at both ends of the TigerFence beam to limit the rip fence's range of movement. The left end sensor default position is as shown (Fig. 10) with

the carriage approaching it. The left end sensor can be re-positioned to limit the minimum range of movement.

27. If the rip fence looks like it would move too close to the saw blade, loosen the fastener securing the left end sensor, slide the sensor to the right and tighten it down.

The end sensor at the right end of the TigerFence beam (Fig. 11) can be re-positioned the same way to limit the maximum range of movement.

Adjust rip fence body leveling wheel for smoother travel

Concept → TigerFence should travel smoothly across the top of the saw table. If it scrapes as it moves, the rip fence body can be raised. This is done by adjusting the height of the leveling wheel.

28. Loosen the nut at the back of the rip fence body (Fig. 12), raise the rip fence slightly, push down on the leveling wheel, and re-tighten the nut.
29. Run the rip fence in and out over the area where it was scraping, and re-adjust if necessary.

Continue → Home Routine

See also... Running Min-Max, Making TigerStop Accurate, Scaling, Saw Kerf, Set Up Auto-Test

The TigerStop Controller

Concept → The TigerStop controller is the ordinary means of operating TigerStop and using its many functions.

- TigerStop versions 3.5 and higher utilize a new type of controller, called **SMT** to distinguish it from the original design. Version and level display on screen when TigerStop is powered on.
- The controller case itself is made of aluminum and has gaskets at all seams and at the LCD screen to prevent the entry of metal dust or other contaminants.



- There is a yellow pilot light  on the controller to indicate that TigerStop is powered .

Primary Function Keys



Program List is used to **program** cut lists, **hot keys**, and to access **menus**.



Increment(ent) is used in the operation of the **Increment** function.



Space Calib(rate) is used to enter lengths in feet, inches, and a fraction, to enter numbers with a fraction, to enter negative lengths. It is also used to **calibrate** TigerStop, to select inches or metric dimensions, and to set saw kerf.



Clear is used to clear or erase data entry one digit at a time.



STOP is used to stop any TigerStop operation, to return to the Ready screen, and to exit the Increment function.

START is used...



- To start movement. After entering a length, a hot key, or an increment, START moves the stop to the length entered.
- To accept a length or quantity when entering a cut list.
- To select a hot key length.

Numeric Calculator Keys



The number keys are used to enter values just like those on any calculator.



...are also used to select inches or metric dimensions.

Math Function Keys



MINUS is used to subtract values, to enter negative values, and to view the previous line of data in a cut list.



PLUS is used to add values, and to view the next line of data in a cut list.



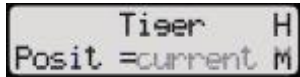
STAR is used to multiply values.



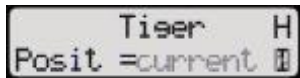
SLASH is used to divide values, and to enter fractions.

Inches or Metric

?➔ What is the screen display telling me?






TigerStop is in Metric mode when **M m** blinks in the lower right corner.






TigerStop is in Inch mode when **I N** blinks in the lower right corner.

➔ To select metric mode...

Press    . The Ready screen will change to .

Metric ➔ *In TigerStop Manual documentation, all values are in Inches. Values and examples in Metric are flagged by the Metric arrow and purple text and background.*

➔ To select inches mode...

Press    . The Ready screen will change to .

Controller Ports

Concept ➔ On the top edge of the controller there are three **ports**. The wide port is for the controller cable. The middle port is for the cable running from your computer to TigerStop. The port closest to the left side of the controller is for the printer cable.

- Level 1 TigerStops will use only the controller cable port.
- Level 2, 3, and 4 TigerStops will use the controller cable and the computer cable ports.
- Level 4 TigerStops will use all three ports.



Controller Cable Facts

1. The SMT controller cable is 6 feet (1.83m) long for TigerStops and 20 feet (6.1m) long for TigerRip Fences.
2. There is only one way to plug in the controller cable: the "male" end plugs into the controller, the "female" end plugs into the port on the side of the motor box.
3. Optional controller cables are available in 20 foot (6.1m) and 30 foot (9.15m) lengths.
4. The controller cable is shipped in the TigerStop accessories box in a pink anti-static bag (Fig. 1) with a warning tag (Fig. 2) that gives instructions on use.



Important!

NEVER bend the controller cable sharply as shown in Fig. 2. It can damage the cable and cause the controller not to communicate with TigerStop.



Fig. 1



Fig. 2



CRITICALLY important!

The TigerStop controller cable is a proprietary cable. You CANNOT replace it with a look-alike cable obtained from a local electronics store. If you try to replace a TigerStop controller cable with any other type, you risk serious damage to your machine!

**"OFF THE SHELF"
PRINTER CABLE**



DEAD WRONG!

N'employez JAMAIS
un câble générique
d'imprimeur d'ordinateur.



Erreur mortelle!

¡NUNCA use
cables genéricos
para impresoras!




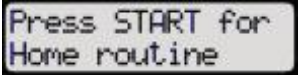
¡Error garrafal!

Home Routine

Concept → Every TigerStop completes a **home routine** on start up. The home routine is a five stage process as described below.

- Prior to running the home routine, TigerStop automatically changes the values of several parameters and then changes them back.
- The **ramps**, **velocity**, **lash** and **min/max limits** are saved.
- Once saved, the acceleration parameters are set to 50 (normally set to 75)
- Velocity parameters are reset to 5 **ips**
- Maximum Limit is set to +1000
- Minimum Limit is set to -1000
- Lash parameter is set to 0.

Recap of the Home routine at Start Up


Turn TigerStop ON . The screen displays .


Press  for the home routine. The screen displays .


Make sure NOTHING is in the path of the stop!


Press  again.


The stop moves away from the blue motor box and begins to run through the 5 stages of the setup routine...

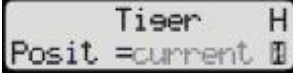
 1 The **stop** moves 1" (25mm) toward the **zero end** to ensure that the **carriage** is outside of the end sensor. This also confirms that there is enough room to move toward the **home end** of the fence in later stages.

 2 The stop reverses direction and moves toward the home end of the machine until it trips the end sensor. This confirms that the sensor is sending a signal to indicate that the carriage is blocked.

 3 The value of the velocity parameter is automatically reset to 1 ips, and the stop backs away 1" (25mm) to clear the far end sensor.

 4 The stop moves slowly and precisely back to the home end sensor again until it is tripped. The position displayed on screen is reset to the calibration parameter saved in the motion menu.

 5 The stop again moves back 1" (25mm) to clear the home end sensor. Velocity and acceleration parameters are restored to the values saved in the motion menu.

After stage 5, the display returns to the Ready screen .

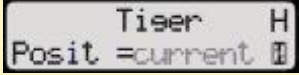
Performing Home Routines After Start Up

Concept → The home routine can usually be performed without **cycling power**. This is most often done if TigerStop X's out, either through a software error, or because the drive is disabled after the stop comes up against an immovable object.

How to Do It → To perform a home routine without cycling power...

- Press   → 
- Press  

This will initiate the home routine.







TigerStop will run through all 5 stages and return to the Ready screen  to indicate that the routine has been completed.

Home Routine Failure


Concept → If the home routine fails at power-on, the drive will be disabled and movement commands will not be processed.

Parameter Check & Adjustment

→ Make sure that the values of the motion menu parameters in your TigerStop match those listed below.

-  InVel = 5
-  InAccel = 50
-  InDecel = 50
-  OutVel = 5
-  OutAccel = 50
-  OutDecel = 50

What is TigerStop Telling Me?

Concept  The controller screen displays TigerStop's current status as a letter at the end of the top line. When TigerStop executes a movement or operation, it passes through several stages, indicated by the letter rapidly changing.

```
targetTiser  H
Posit =current  I
```

H = Holding position: TigerStop is at rest.

```
targetTiser  A
Posit =current  I
```

A = Accelerating: TigerStop is speeding up from 0 to its **target velocity.**

```
targetTiser  C
Posit =current  I
```

C = Constant velocity: TigerStop is travelling at its target velocity.

```
targetTiser  D
Posit =current  I
```

D = Decelerating: TigerStop is slowing down to 0 velocity.

```
targetTiser  L
Posit =current  I
```

L = Lash compensation: TigerStop is making an adjustment move to account for **lash.**


```
targetTiser  W
Posit =current  I
```

W = Wait: TigerStop is waiting to move, having disabled the interlock solenoid.

```
targetTiser  X
Posit =current  I
```

X = Drive disabled: For some reason TigerStop's drive is disengaged.

TigerStop has cut out and needs to be reset.

 **TigerRip Fence specific: X = TigerStop is at rest. Drive must be disabled because rip fence handle is in lock down position, and the drive cannot be allowed free movement once it comes to rest.**

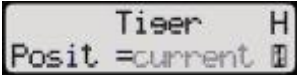

```
targetTiser DM H
Posit =current  I
```

DM = Dead Man Open: TigerStop "thinks" the interlock limit switch is OPEN and the saw or other tool engaged. The stop can NOT move with this status.

Running Min-Max

Concept → The Min-Max routine defines TigerStop's **operating range** by detecting the position of the end sensors at both extremities of the aluminum fence extrusion.

Min-Max is an auto-setup mode and should be run ONLY after the stop has run through the home routine. Min-Max should be the ONLY method used to change minimum or maximum parameters. See also, When to Run Min-Max.

1. At the Ready screen  press and HOLD  and  at the same time, then quickly release.

2. The screen displays .

Make sure NOTHING is in the path of the stop!

3. Press  again.

*The stop will move to both ends of the fence extrusion, first to the **far end**, then to the **motor end**. The minimum and maximum parameter values are now changed and saved.*

When to Run Min-Max

Concept → The Min-Max routine should be run...

- When a belt is changed or re-tensioned.
- When TigerStop has a problem that affects the minimum and maximum parameters.
- When parameters have been reset.
- When a controller has been replaced.

See also...

Set Up Auto-Test

Now Run Auto-Test

Making TigerStop Accurate

Concept → Calibrate TigerStop to set its distance from zero. Calibrate whenever the saw blade is changed, or when you add or remove a stop attachment, such as a gangstop or pusher foot.

How to Do It → From a position at least 12" out, enter a length of 10".

1. Press   .

The stop moves inbound to a position 10" from the saw blade.

2. Cut a piece of stock at this length and carefully measure it.



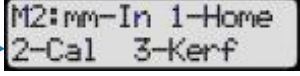
It should be right on 10". If it is accurate, no need to calibrate.

Be sure to use an accurate measuring tool. TigerStop can be only as accurate as you make it!

→ If the sample cut measured 10¼" instead of 10" ...

It's time to calibrate!

Continuing →

3. Press   → . The M2 menu displays.

4. Press  → . The M4 menu displays.

You enter the actual measured length of your sample piece at this screen.

5. Press       .

This will save the original position of 10" as 10.25", correcting the inaccuracy.

6. Cut another sample piece using the same procedure, starting at step 1 above.

If the sample piece measures the same as the position shown on screen, TigerStop is calibrated. If it is still off, repeat the process.

Scaling

Concept → Most TigerStops require a scaling adjustment **biannually**. This operation may also be performed on new machines received from the factory, because the environment in your facility can be dramatically different than that in our assembly shop.

There are two methods that can be used to **scale a TigerStop**. The first method makes use of a spreadsheet and is much quicker. The second method makes use of a "trial and error" method of gradual changes to the scale value combined with making sample cuts until the sample length is accurate. Refer to Manual Scaling for this method.

Spreadsheet Method

*To scale your TigerStop a short and a long measurement are needed to work from. The short measure must be 12" or less, and the long measure about 10" less than the **working length** of the TigerStop. In the case of Tiger16 or longer, you must use a long measurement of at least 70"*




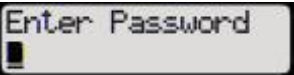




Metric → *The short measure must be 300mm or less, and the long measure about 200mm less than the working length of the TigerStop. In the case of Tiger16 or longer, you must use a long measurement of at least 1780mm.*

ALWAYS use the same measuring tool for all measurements!

→ Copy the scaling spreadsheet from the TigerStop Manual CD, or create one inserting the formulas shown in the example below.

Microsoft Excel - Scaling_Spreadsheet.xls						
File Edit View Insert Format Tools Data RoboPDF Macola Enterprise Suite Window Help						
Arial 10 B I U \$ % + %0 -00						
F16						
1	INCH MEASUREMENT SYSTEM					
2	Initial Scale	Short Position	Long Position	Long Measure	Position Error	New Scale
3					=SUM(D3-C3)	=(A3)*(((C3)-(D3))/(C3-B3)+1)
4	Enter positions and measurements as whole inches, decimal inches, or inches and fractions. Any decimal or					
5						
6	METRIC (MILLIMETER) MEASUREMENT SYSTEM					
7	Initial Scale	Short Position	Long Position	Long Measure	Position Error	New Scale
8					=SUM(D8-C8)	=(A8)*(((C8)-(D8))/(C8-B8)+1)
9	Enter positions and measurements in MILLIMETERS.					
10						
11						
12						
13						

Find the current scale factor the machine is using in the Calib* Motion menu.

- Press   . At  enter your  and press . Scroll to the scale parameter by pressing  to go forward, or  to go backward.

- When you get to Scale , enter the value you find there into spreadsheet cell

A	
1	
2	Initial Scale
3	

A, Initial Scale

- Calibrate TigerStop at the Short Position, a point close to the application. Move the stop to this position by an inbound movement, for example by moving from 10" to 8". Enter this position into

B	
	INC
	Short Position

spreadsheet cell B, Short Position

- Next, move the stop to a point 2" (50mm) past the Long Position, and then bring it back to the Long Position, again by an inbound movement. Enter this position into spreadsheet cell C, Long

C	
	H MEASURE
	Long Position

Position

- Cut a sample piece with the stop at the Long Position. Carefully measure the sample piece and

D	
	EMENT SYST
	Long Measure

enter the measured length of this sample into spreadsheet cell D, Long Measure


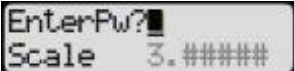



- The spreadsheet instantly calculates the Position Error  and the New Scale value appears

F	
	New Scale
	#DIV/0!

in spreadsheet cell F, New Scale

The New Scale value should be reasonably close to the old value. If it is SIGNIFICANTLY different, check your work for errors. If everything appears correct, enter the new value into the Scale parameter.

TigerFence Installation













 The Scale parameter  is DOUBLE password protected. To change the value, you must re-enter your  and press , and then enter the new value for scale from spreadsheet cell F, and press  to save it.

Change the Scale Parameter

This instruction simply tells you how to access the Calib* Motion menu to change the Scale parameter. Refer to the Scaling or Manual Scaling topics for complete instructions on when and why to change this parameter.

To tamper with the Scale parameter without reasonable cause will make your TigerStop measure inaccurately.

How to Do It  To access the Motion Menu...

1. Press   .
 2. At  enter your  and press .
 3. Scroll through the parameters by pressing  to go forward, or  to go backward until you get to the Scale parameter .
- Scale is double password protected.  indicates this.*
4. 4. Enter the password again and press . This lets you change the value of the Scale parameter.
 5. 5. After you change the parameter value, press  to save the change.

Manual Scaling

Concept Most TigerStops require a scaling adjustment **biannually**. This operation may also be performed on new machines received from the factory, because the environment in your facility can be dramatically different than that in our assembly shop.

There are two methods that can be used to **scale a TigerStop**. The first method makes use of a spreadsheet and is much quicker. Refer to Scaling for this method. The second method makes use of a "trial and error" method of gradual changes to the scale value combined with making sample cuttings, until the sample length is accurate.

How to Do It Manual Method


To scale your TigerStop a short and a long measurement are needed to work from.


*The short measure must be 12" or less, and the long measure about 10" less than the **working length** of the TigerStop. In the case of Tiger16 or longer, you must use a long measurement of at least 70"*

Metric *The short measure must be 300mm or less, and the long measure about 200mm less than the working length of the TigerStop. In the case of Tiger16 or longer, you must use a long measurement of at least 1780mm.*

ALWAYS use the same measuring tool for all measurements!









1. Calibrate TigerStop at a point close to the **application**. Move the stop to this position by an **inbound movement**, for example by moving from 12" to 10". For easy instructions on calibrating your TigerStop at 10", see Making TigerStop Accurate. You can then return to this topic and continue at step 2.
2. Next, move the stop out to 72" (1828mm), and then bring it back to 70" (1778mm), again by an inbound movement.
3. Cut a sample piece with the stop at this length. Carefully measure the sample piece.

DECREASE Scale  *If the piece measures **LONGER** than 70", you will **DECREASE** the scale factor at Step 5.*

INCREASE Scale  *If the piece measures **SHORTER** than 70", you will **INCREASE** the scale factor at Step 5.*

NEVER decrease or increase the Scale factor by more than 0.005 each time!

4. Move the stop back in to 10" (254mm).
5. Change the scale factor by an increment no more than 0.005. Click here for instructions on changing the scale factor.
6. After you have changed the scale factor, the stop's position as shown in the controller display will change.

7. Press     . Enter 10" by pressing    to restore the correct position.

8. Repeat steps above until TigerStop's short and long positions are accurate.

Saw Kerf

Concept Saw kerf is the width of the cut made by your saw blade. Any time you change the saw blade, you must check the kerf to make sure it matches the TigerStop kerf parameter. If it is larger or smaller, you must adjust the kerf. This is done at the controller.

How to Do It How to set saw kerf

1 Make a sample cut to check the actual kerf.

1. Cut a sample board, for example, at 24". Make sure it is very accurate!
2. Cut the sample board into two pieces.
3. Carefully measure each of the cut pieces.
4. Add the lengths of the pieces together.

The kerf will be the difference in length between the original uncut board and the combined length of the two cut pieces.

2 Look at the current kerf value.

5. Press    

6. Press     and look at the current kerf value.

If the current kerf value is correct, press  to leave it alone and exit the M5 menu.

If the kerf displayed is incorrect, change it to match your sample...

3 Update the kerf value.

7. Enter the correct kerf value and press  to save it and exit the M5 menu.

Kerf Range

- o Normal kerf ranges between 1/8" and 7/32".
- o TigerStop displays this in decimal inches as between 0.125" and 0.225".

Metric *The normal range of kerfs is between 3.2mm and 5.7mm.*

Set Up Auto-Test

Concept Running auto-test requires that you choose two positions, one near the motor and the other near the far end, and program these two positions alternately into the **first 10 hot keys**. When auto-test is run, the stop will travel between these two positions until you press the STOP button.



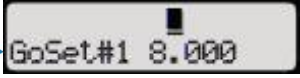
How to Do It How to set up Auto-Test


1 At the Ready screen  press    to start entering the "hot keys."




Example Use 8" and 50" as the near and far positions.

To run auto-test for your machine, choose as the far position a length at the far end of your TigerFence instead of 50" as in this example.

To run auto-test on a metric TigerFence, you can use 200mm and 1270mm, approximate metric equivalents of the positions used in this example.


2 Press  to enter the first (near) length and then  to view it .

Press  to advance to the next hot key.

3 Press   to enter the next (far) length and then  to view it

.

You can automatically advance to the next hot key by pressing  after each entry.





4 Now, program hot keys 3 to 10 alternately with 8" and 50" (see list below), and then press  to save them and exit the "hot keys" program.

Auto-test will NOT run correctly unless ALL 10 hot keys are programmed!


Hot Keys #3 to #10

- GoSet#38"
- GoSet#450"
- GoSet#58"
- GoSet#650"
- GoSet#78"
- GoSet#850"
- GoSet#98"
- GoSet#10 ... 50"



Now Run Auto-Test

5 Press    to access the Calib* Motion menu , and then enter your  and press .

TigerFence Installation

Press  repeatedly until you see , enter your  again, and then .

Make sure NOTHING is in the path of the fence!

Press   to change the parameter value from 0 (inactive) to 1 (active).

TigerFence immediately starts running the auto-test, coursing back and forth between the close and far positions you programmed in hot keys 1 to 10.

Press  to stop running auto-test.

TigerStop Warranty

TigerStop, TigerRip Fence, & TigerStop Accessories

TigerStop products are sold with a 12 month or 2,000 hours of service warranty against defects in material or workmanship when operated in normal environments and under normal circumstances for their intended purpose. Electronics carry a 6 month limited warranty. Consumable items such as belts and paint on wear surfaces are not covered under this warranty.

TigerStop Replacement Parts

Spare parts are sold with a 30 day warranty against defects in material or workmanship when operated in normal environments and under normal circumstances for their intended purpose.

- Same day shipment of most parts will be made for orders received before 2:00 P.M. PST Monday through Friday.
- All **non-warranty** parts are shipped via UPS Ground, unless the customer requests higher service level, and UPS charges will be added to the invoice.
- Within 30 days of purchase, warranty parts are shipped at no charge via UPS Red.
- Warranty parts beyond 30 days of purchase are shipped via UPS Ground at no charge to the customer. If a higher UPS service level is required, the customer will be invoiced for the higher service level less the cost of ground.

Service

Our service technicians are **on duty during regular business hours (360) 254-0661 x238 Mon-Fri 7am~4pm PST (West Coast), service@tigerstop.com at our assembly plant in Vancouver, WA, U.S.A.** All incoming service calls and/or email are acknowledged, and most challenges are resolved, within the same business day.

We provide an operation manual with every machine which explains in detail the installation and programming of the TigerStop. All TigerStops and TigerRip Fences are assigned a serial number and all activities concerning every unit are documented for future reference.

Important Notices

TigerStop, TigerFence and TigerCrossCut are machine components intended for use in conjunction with other potentially dangerous machinery. The use of these components does not make that machinery safe. TigerStop LLC's products are not intended to substitute, in any manner, for safety requirements in general, or in conjunction with other machinery. These components must be incorporated into machinery by persons qualified to design safety features to make the machine as safe as possible and to ensure that it meets federal, state and local law with respect to safety and all other regulatory requirements. In addition, TigerStop, TigerFence and TigerCrossCut are machine components that should only be operated by qualified persons trained in safe operating procedures. Illustrations of TigerStop, TigerFence and TigerCrossCut components in use do not show and are not intended to show safety features necessary to make the machinery safe to operate.

Limit of Liability

All rights reserved. The information contained in the TigerStop Manual has been validated and reviewed for accuracy. No patent liability is assumed with respect to the use of the information contained herein. While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions.

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TigerFence Installation