

See "Enable Code" on page 15!

gerstop[®] fast and accurate...every time

TigerCrossCut



February 2017 Mk2

Serial Number Extension TigerStep*







Nut Pack



Power Cable



Motor Cover



Controller Cable



Controller Stand



Quick Reference Cards



F-45 End Plate



End Plate Bar



F-45 Hardware **Pack**



Safety First!

IMPORTANT SAFETY INFORMATION. READ ALL WARNINGS BEFORE OPERATING THIS PRODUCT.



WARNING: Installation of your TigerStop Product must be done by a person trained in the safe design and installation of automation products, and in the safe operation of power equipment. Ensure that such installation meets all legally required safety requirements and guidelines, and that proper guarding and safety devices are provided on all sides of the equipment to preclude unintended access during operation. Consult with and follow the recommendations of a qualified safety engineer.

WARNING: TigerStop Products are components intended for use in conjunction with potentially dangerous machinery. The use of TigerStop Products does not make other machinery safe. TigerStop Products are not intended to substitute, in any manner, for safe operating practices in general, or for safety features present in other machines designed to make those machines as safe as possible. TIGERSTOP PRODUCTS, IF USED OR INSTALLED IMPROPERLY, MAY CAUSE PERSONAL INJURY OR DEATH AND SHOULD ONLY BE OPERATED BY PERSONS TRAINED IN THEIR SAFE OPERATING PROCEDURES. Illustrations of TigerStop Products in use do not show, and are not intended to show, all safety features and practices necessary for their safe operation.



WARNING: TigerStop Products must be installed in accordance with all local, state, and federal regulations. Only personnel properly trained in the safe design and installation of automation machinery and related power equipment should install TigerStop Products onto other equipment, to ensure a safe and proper work station. TigerStop Products should not be operated without proper training, both in the operation of TigerStop Products, and in the operation of related equipment.

IMPORTANT CAUTION:

The motor box (compartment) contains DC voltage with potentially FATAL amperage. NEVER attempt any unauthorized actions inside the motor box.



WARNING: Using a TigerStop interconnect does not relieve you of the responsibility for making sure that your saw or other tool has all the necessary safety equipment in place. All installations must meet all legally required safety requirements and guidelines. Installation and training should be done following the recommendations of a qualified safety engineer.



DANGER: This machine can start, move and stop automatically. Keep hands and loose clothing clear of moving parts while operating. Moving parts can crush and cut. When used with a saw or other cutting equipment, bodily injury and death may result if operated without safety guards on all machines. Do not operate with guards removed. Operators must wear adequate eye and ear protection.



DANGER! Don't get pinched by the push feeder. Keep your hands away when in motion!

IMPORTANT SAFETY INFORMATION. READ ALL WARNINGS BEFORE OPERATING THIS PRODUCT.



Keep the work area clean and well lighted to avoid accidental injury.



Do not use TigerStop machines in a dangerous environment. Using power tools in damp or wet locations or in rain can cause shock or electrocution.



Do not operate near flammable liquids or in gaseous or explosive atmospheres!



Wear proper apparel, no loose clothes, long hair or jewelry which could get pulled into moving machinery or materials.

Wear non slip footwear, safety glasses, ear protection and a dust mask.



Use only 3- wire extension cords that have 3-prong grounding type plugs and 3-pole receptacles that accept the tools plug for 120VAC. Use only 5-wire cords and plugs when using 3 phase.



Do not open motor compartment or controller keypad. DC Voltage with potentially FATAL amperage! Disconnect power before servicing. No user-serviceable parts inside.

DO NOT operate this or any machine under the influence of drugs or alcohol!



No one should operate this machine except for fully qualified personnel.

Read the manual!

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Installation Requirements

TigerCrossCut Power Requirements

110 VAC	15 Amps
208 VAC	20 Amps
240 VAC	20 Amps

TigerCrossCut must have a dedicated circuit. No other equipment or devices should be on the same circuit.

WARNING! Do NOT use a high leg delta circuit to power TigerCrossCut.

If you are not sure what kind of circuit you are using, STOP! Have a qualified electrician confirm the main power circuit.



Do NOT drill or tap into the TigerCrossCut beam!

Drilling holes into the TigerCrossCut beam may damage the drive system. All fastening or attachment to the fence beam must be made by inserting T-bolts or T-nuts with washers.



Do NOT over tighten mounting hardware!

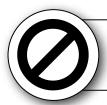
It is critical that the bolts are prevented from over tightening and driving into the fence beam.

Always use washers.



ALWAYS evenly tighten mounting hardware!

Uneven tightening of mounting hardware can introduce a slight twist or other deformation in the beam. This will result in inaccurate measurement and premature failure of the drive or other components.



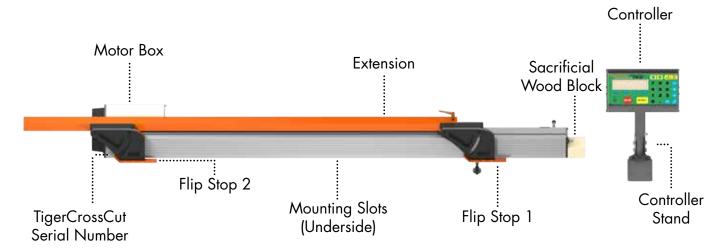
NEVER open TigerCrossCut Motor Box!

The motor box compartment contains DC voltage with potentially FATAL amperage.

NEVER attempt any unauthorized actions inside the motor box!

TigerCrossCut Installation

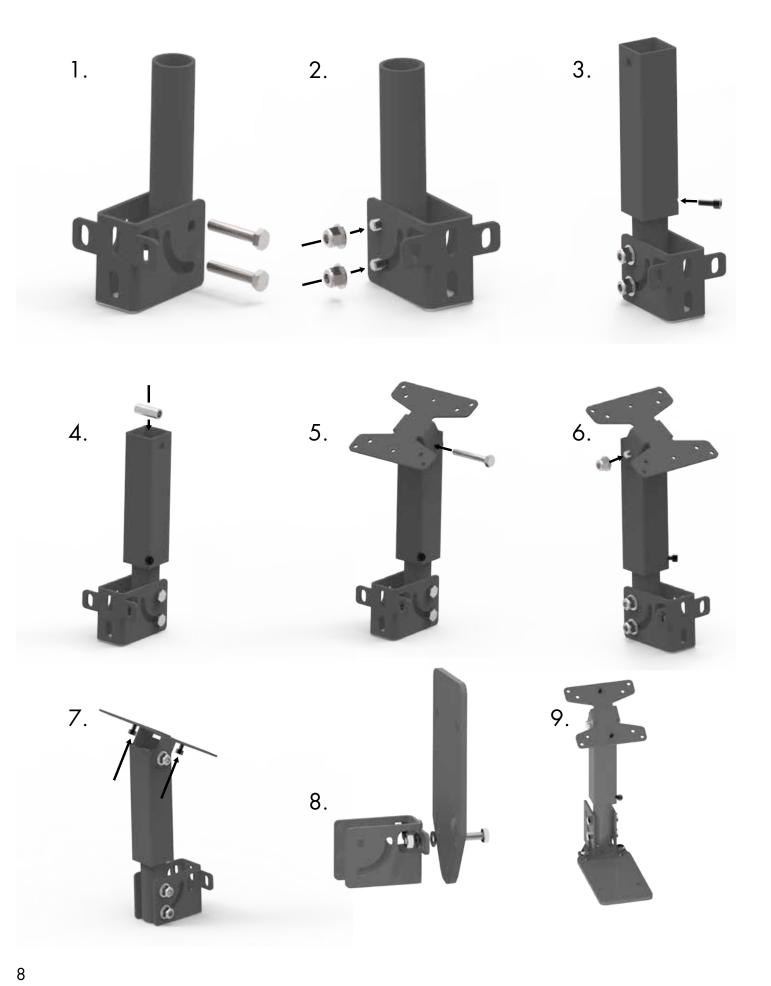
TigerCrossCut Anatomy



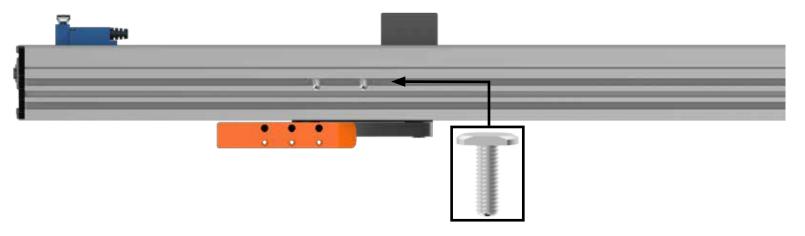
Installation

1. Install the TigerCrossCut Controller Stand. Continued on page 8.

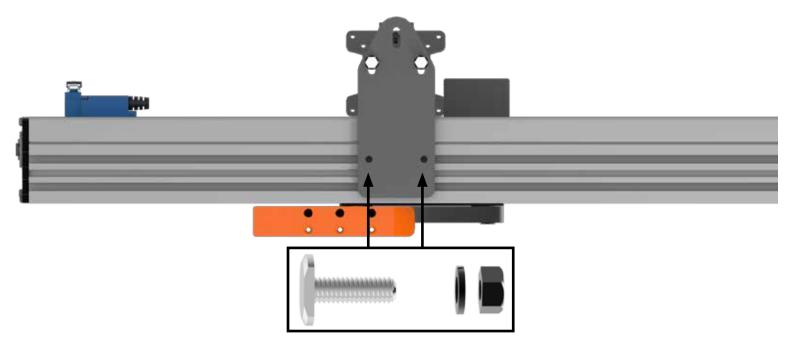
Note: The TigerCrossCut controller stand will hold the TigerCrossCut controller at a comfortable angle and height. The stand is attached to the bottom of the TigerCrossCut beam before being installed to the table saw.



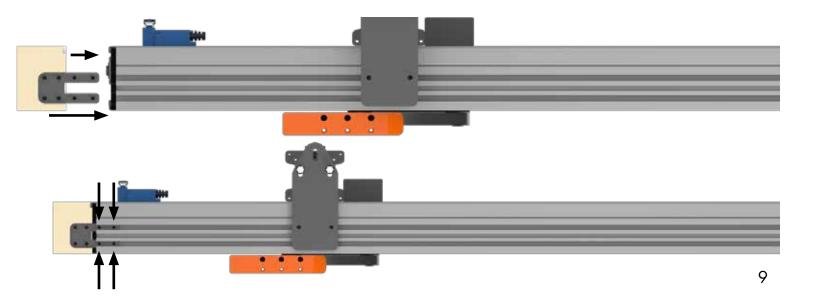
2. Slide two T-Bolts into one of the mounting slots.



3. Set the controller stand base onto the T-bolts and thread mounting hardware.



4. Insert the sacrificial wood block into the end of TigerCrossCut. Tighten the set screws. Note: This block should stick out past your saw blade once TigerCrossCut is mounted.



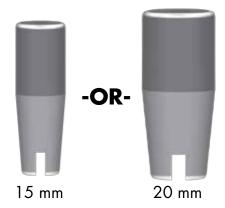
If you are installing TigerCrossCut to an Altendorf F45, skip to page 12 for installation instructions.

- 5. Perform lock out/tag out procedures on your table saw.
- 6. Remove the existing crosscut fence from your saw.

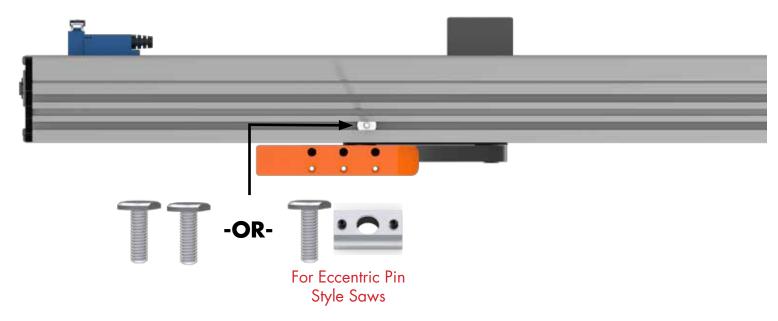
Note: Ensure the mounting surface is clean and smooth. Nothing should prevent a tight fit.

- 7. There will now be two empty mounting holes where the existing crosscut fence was mounted. Note: You may have only one empty hole and an eccentric pin. This is OK as well. If you don't have any empty mounting holes, you may need to modify your sliding bed.
- 8. Locate the two sets of alignment cones. Test each set to find the size that fits best in your empty mounting holes.

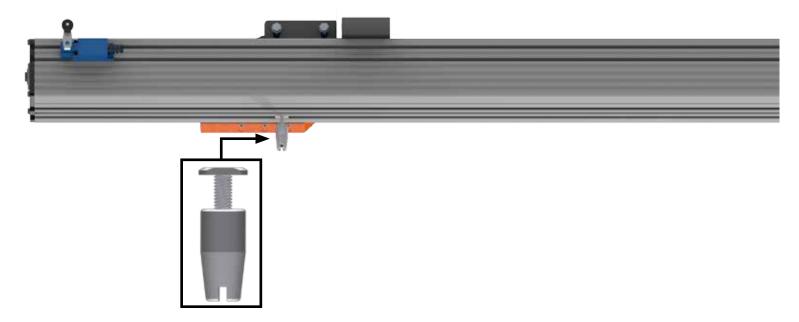
Note: TigerStop sends a 15 mm set and a 20 mm set. Modification of the cones may be necessary for other size holes.



- 9. Set TigerCrossCut on your sliding bed, face down, so the mounting slots are exposed. Note: Place TigerCrossCut with the motor box away from the saw blade.
- 10. Insert two T-bolts into the mounting slot of TigerCrossCut and align them with the empty holes. Note: If you have one empty hole and an eccentric pin, use one T-bolt and the included custom T-nut.



11. Thread alignment cones onto each of the T-bolts.



- 12. Rotate TigerCrossCut so that the alignment cones go into the empty mounting holes. Note: Once TigerCrossCut is upright, hold it in place and ensure that TigerCrossCut is tight against the mounting surface.
- 13. Thread a long set screw onto the open side of each cone. Thread a knob on each screw. Note: If you are installing TigerCrossCut on an Altendorf F45, skip to page 12.



Altendorf F45 Installation

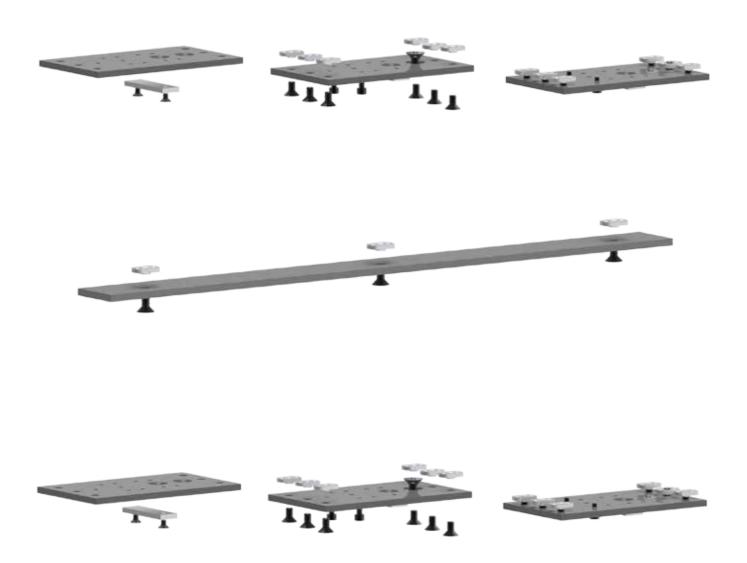
- 1. Perform lock out/tag out procedures on your table saw.
- 2. Remove the existing crosscut fence from your saw.

Note: Ensure the mounting surface is clean and smooth. Nothing should prevent a tight fit.

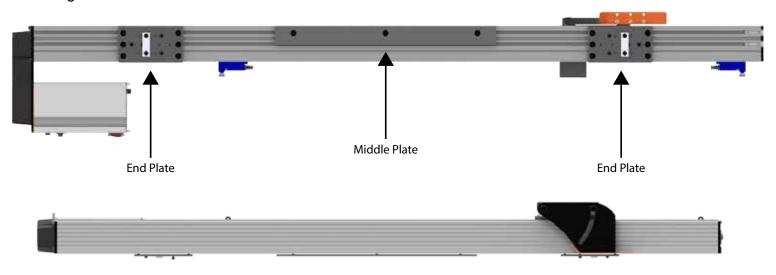
3. Set TigerCrossCut on your sliding bed, face down, so the mounting slots are exposed. Note: Place TigerCrossCut with the motor box away from the saw blade.



4. Assemble each of the 3 F45 adapter plates.

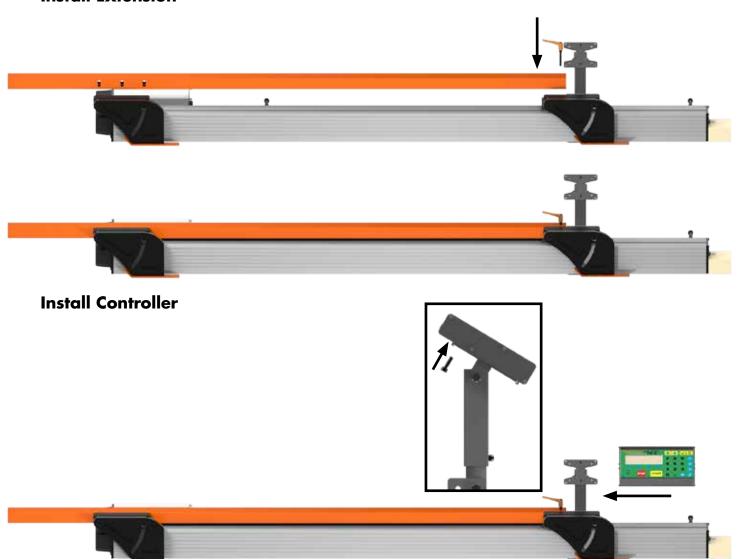


5. Slide each adapter bracket into the TigerCrosscut mounting slots. Each bracket is offset so that the edge of the bracket is flush with the face of the fence.



- 6. Line up the end plates with the Altendorf F45 locking cams.
- 7. Join the locking cams to the end plates.
- 8. Attach the cams to the end plates and tighten the end plate hardware.

Install Extension



Install Motor Cover

Install the motor cover over the exposed drive pulleys on the motor end of TigerCrossCut using 3 supplied screws.

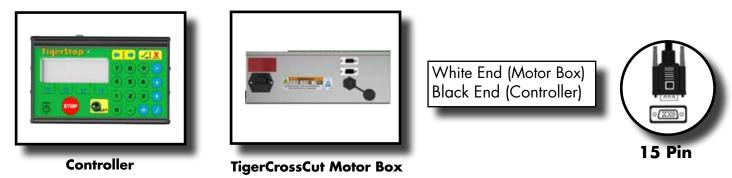


Final Connections

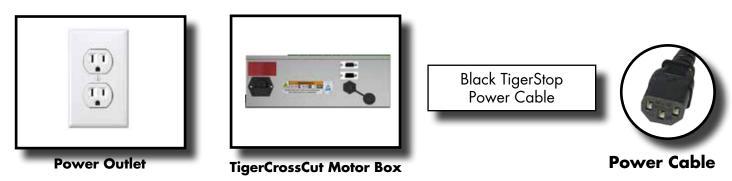
Once TigerCrossCut and all accessories are installed, its time to make the final connections.

1. Connect the TigerCrossCut Controller Cable to the Controller and to the Motor Box.

Note: The TigerCrossCut Controller Cable is a proprietary cable. DO NOT use an "off the shelf" cable. Doing so can cause damage to TigerCrossCut.



2. Connect the TigerCrossCut power cable from your power outlet to the TigerCrossCut power plug.



Enable Code

Your new TigerCrossCut will not function until you enter the enable code, which is supplied by TigerStop Customer Service.

The enable code notifies TigerStop, LLC when your new TigerCrossCut is about to be put into service. This lets us start the warranty on the exact day you turn it on. The enable code also allows TigerStop to turn on any upgrades you have purchased.

How to Enable TigerCrossCut

1. Fill out the TigerStop Warranty Registration sheet that is shipped with your TigerCrossCut controller.

Fax or email the registration to:

(360) 260-0755 service@tigerstop.com

You may also register your warranty by phone:

TigerStop Customer Service (360) 254-0661

TigerStop Customer Service will contact you by phone to give you the enable code, within the hour during regular business hours, Monday through Friday 6:00 am - 4:00 pm PST.



- 2. When you have received your enable code, power up TigerCrossCut using the power switch on the motor box.
- 3. TigerCrossCut will ask you to enter your enable code. Enter the code received from TigerStop and press .

Your TigerCrossCut has now been enabled.

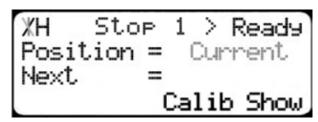
First Power Up

After entering the enable code, TigerCrossCut will ask to run the 'Home Routine'.

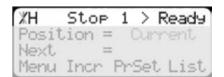
Home Routine Explained

Every time TigerCrossCut is powered up, it performs the 'Home Routine'. The home routine is a 3 step process where TigerCrossCut will move to its farthest position.

- 1. Press start to run the Home Routine.
- 2. When movement stops, TigerCrossCut will display the Ready Screen.



The Ready Screen is the starting point for all TigerCrossCut functions. Let's take a look at the screen, line by line.



Line 1 displays the "heartbeat". The heartbeat is a line that rotates and lets you know that TigerCrossCut is functioning normally. The letter next to the heartbeat is the drive indicator. This tells you what the motor is doing. TigerCrossCut also displays which stop you should be using.

Drive Indicator	Meaning
Н	Holding Still
Α	Accelerating
С	Moving at Constant Speed
D	Decelerating
W	Waiting
S	Stopping
Т	Waiting for Text Entry
Х	E-stop Error
N	Communication Error



Line 2 shows the current position of TigerCrossCut. The position will show with 'in' when in inches mode and 'mm' when in metric mode.



Line 3 shows the next position of TigerCrossCut. This is where user input is shown.

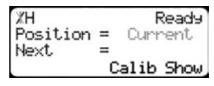


Line 4 displays the soft key prompts. These prompts tell you what the soft key button below it does. These can change when you access different screens.

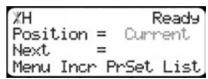
Calibration Settings

Once homed, we will need to set a few settings to ensure TigerCrossCut is measuring properly.

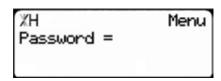
Find the End Limits



1. From the Ready Screen, press the [Show] soft key to show the menu options.

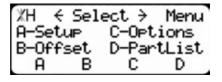


2. Press the [Menu] soft key to display the Menu Select screen.



3. TigerCrossCut requires a password to access all menu options. Enter your TigerCrossCut password and press .

Note: By default, the TigerCrossCut password is set to the serial number.



4. At the Menu Select screen, press the [Setup] soft key to access the Setup Menu.



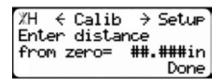
5. Press to scroll through the settings. Stop when you see FindLim.

6. Press to run the Find End Limit routine.

Note: Ensure TigerCrossCut can move its entire length without obstruction.

TigerCrossCut will move once START is pressed.

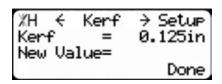
Calibrate TigerCrossCut



- 1. Press to scroll through the settings until you get to the Calib setting.
- 2. Measure how far the TigerCrossCut is from your saw blade.
- 3. Press to save the parameter.

Set Kerf

The kerf is the measure of how much material is destroyed by the saw blade during a cut.



1. Press to scroll through the settings. Stop when you get to the Kerf setting.

To measure kerf...

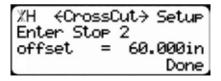
- 1. Cut a sample piece and measure it with a caliper. Record your measurement.
- 2. Cut this piece in half.
- 3. Put the two pieces together as if they were one piece and re-measure with a caliper.
- 4. The difference between the measurement on step 1 and the measurement on step 3 will be your kerf value.
- Enter your kerf value and press = .

Note: It is important to check and reset the kerf every time the saw blade is changed or sharpened.

Set CrossCut Offset

The CrossCut Offset tells TigerCrossCut where Stop 2 is in relation to Stop 1.

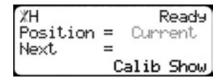
- 1. Flip up Stop 1.
- 2. Put material against Stop 2 and make a cut.
- 3. Measure the cut piece between the saw blade and Stop 2.
- 4. Flip down Stop 1 and cut the piece again.
- 5. Measure the cut piece.
- 6. The difference between the two cut pieces is your new CrossCut Offset.



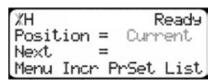
- 7. Press to scroll through the settings. Stop when you get to the CrossCut Offset setting.
- 8. Enter your Crosscut Offset calculated in step 6.
- 9. Press the [Done] soft key to save the parameter.

Set CrossCut Alarm

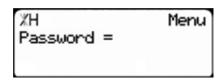
The CrossCut Alarm setting alerts the user when a flip stop change is required.



1. From the Ready Screen, press the [Show] soft key to show the menu options.

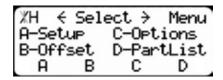


2. Press the [Menu] soft key to display the Menu Select screen.

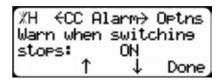


3. TigerCrossCut requires a password to access all menu options. Enter your TigerCrossCut password and press .

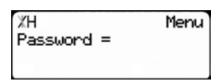
Note: By default, the TigerCrossCut password is set to the serial number.



4. At the Menu Select screen, press the [Options] soft key to access the Options menu.



- 5. Press to scroll through the settings. Stop when you get to the CrossCut Alarm setting.
- 6. Press [B] or [C].

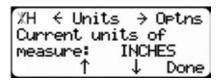


- 7. Enter your TigerCrossCut password and press .

 Note: By default, the TigerCrossCut password is set to the serial number.
- 8. Press [B] or [C] to toggle the setting.
- 9. Press = to save the parameter.

Set Units

TigerCrossCut can display its position in inches or metric.



- 1. Press to scroll through the settings. Stop when you get to Units.
- 2. Press [B] to toggle between inches and metric.
- 3. Press the [Done] soft key when finished.

TigerCrossCut is now ready to use. To view the complete TigerStop users guide, visit the support section of www.tigerstop.com.

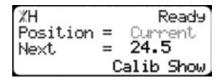
Basic TigerCrossCut Functions

Manual Movement

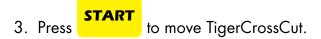
To manually move TigerCrossCut to a position, you must enter the length you want TigerCrossCut to go to. This length can be entered as a decimal or a fractional value.

Entering Decimals

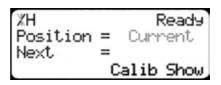
1. Start at the Ready Screen.



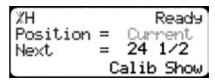
2. Enter a length at the controller. Example: To enter 24 1/2 as a decimal, enter **2 4 . 5**.



Entering Fractions



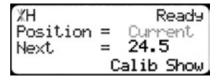
4. Start at the Ready Screen.



5. Enter a length at the controller.

Example: To enter 24 1/2 as a fraction, enter **2 4 1**



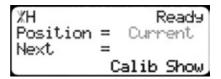


to move TigerCrossCut. 6. Press

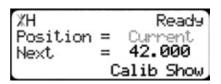
Notice that even though you entered a fraction, TigerCrossCut will display the position as a decimal once it has moved. TigerCrossCut cannot display fractions in the 'Position' field.

Calculator Mode

TigerCrossCut has a calculator function that can be used to do simple math problems.



1. Start at the Ready Screen.



2. Just like a normal calculator, you can use the math function keys to enter math problems.

Example: I want to add 12 inches to 30 inches.

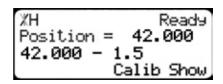


The answer will appear in the 'Next' field.

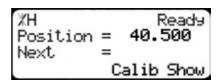
4. Press start and TigerCrossCut will move to the calculated position.

You can also do math functions on the current position.

Example: I want to subtract 1.5 inches from my current position of 42 inches.



1. Press • 1 • 5 •

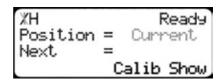


The answer will appear in the 'Next' field.

2. Press start and TigerCrossCut will move.

Jog

TigerCrossCut can be manually jogged in or out. When activated, TigerCrossCut will move until you let go of the jog button. It will then glide to a gentle stop.



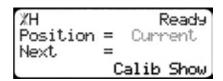
- 1. Start at the Ready Screen.
- 2. At the top of the TigerCrossCut controller, you have 🗘 and 🗘. To jog, press and hold one of these buttons.

Note: If the jog buttons move TigerCrossCut in the wrong direction, you can use the 'Jog Reverse' setting in the 'Setup' menu to reverse the movement.

Increment

The increment function is a push feed mode used to step TigerCrossCut through a series of movements. Increment...

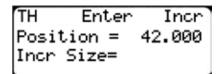
- Can be a positive value that will move TigerCrossCut towards the tool.
- Can be a negative value that will move TigerCrossCut away from the tool.
- Will compensate for kerf automatically using the 'Kerf' setting in the 'Setup' menu.
- Can only store one increment value at a time.



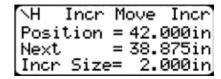
- 1. Start at the Ready Screen.
- 2. Press the [Show] soft key to display more options.

ЖН	Ready
XH Position = Next = Menu Incr F	Current
Next =	
Menu Incr F	rSet List

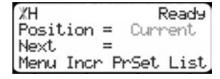
3. A new set of options have appeared. Press the [Incr] soft key to access the Increment menu.



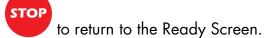
4. Enter the size you want to increment and press . For this example, I am going to use an increment of 2 inches.



5. The current position is 42. If that is where you want to start, press [Start] to begin incrementing. If you need to move the stop to load material, enter the position you wish to move to and press [Start]. TigerCrossCut will move to position. Load your stock and press [Start] to increment.



6. When you are finished, press



PreSet

The PreSet function is a set of 100 programmable hot keys used to quickly access common lengths. PreSets...

- Can be used in Set Point, Pusher or Increment mode.
- Can be programed in PreSet slots number 1 100.

Note: PreSet functionality can be changed using the 'PreSet' setting in the Part List menu.

PreSet Programming

1. From the Ready Screen, press the [Show] soft key to show the menu options.

```
XH Ready
Position = Current
Next =
Menu Incr PrSet List
```

2. A new set of soft key options have appeared. Press the [PrSet] soft key to access the PreSet feature.

```
TH Enter PrSet
Pre-Set#
Press START to move.
View Edit Clear
```

3. Enter the number of the preset you want to program and press the [Edit] soft key.

For this example, I am going to program PreSet number 1.

TH ←Edit 1 → PrSet Pre-Set = Empty New Value=15 15/16 View Clear

4. Enter the length you want the PreSet to move to, and press . For this example, I want to move to 15 15/16 inches.

%H ←Edit 1 → PrSet Pre-Set = 15.937in New Value= View Clear 5. The PreSet value is now set.

6. Press to go back to the Ready Screen.

Using the PreSet

%H Ready Position = Current Next = Menu Incr PrSet List 1. Start at the Ready Screen.

2. Press the [PrSet] soft key to access the PreSet menu.

TH Enter PrSet Pre-Set# Press START to move. View Edit Clear

3. Enter the PreSet number you wish to use and press

START

%H Ready Position = 15.937 Next = Menu Incr PrSet List 4. TigerCrossCut will move to the PreSet position.

Deleting PreSets

XH Ready Position = Current Next = Menu Incr PrSet List

- 1. Start at the Ready Screen.
- 2. Press the [PrSet] soft key to access the PreSet menu.

TH Enter PrSet Pre-Set# Press START to move. View Edit Clear Enter the PreSet number you wish to delete and press the [Clear] soft key.

%H ←Clear 1 → PrSet Pre-Set = 15.937in Press OK to clear. View Edit

- 4. Press 📞 to clear.
- 5. TigerCrossCut has now deleted the PreSet.

Quick Calibration

Quick calibration is a shortcut to the calibration setting. This allows advanced TigerCrossCut users to quickly calibrate.

XH Ready Position = Current Next = Calib Show 1. Start at the Ready Screen.

Note: If you are viewing the expanded options, press

XH Calib Ready Enter distance from zero= Done

- 2. Press the [Calib] soft key.
- 3. Measure how far the TigerCrossCut is from your saw blade.
- 4. Enter this measurement and press the [Done] soft key.
- 5. TigerCrossCut is now calibrated.

Working with Part Lists

TigerCrossCut has a versatile part list feature that allows users to enter large lists of parts for use with the TigerStop Dynamic Optimization upgrade. This lets the user run, view, edit, clear and optimize lists, then process the parts quickly and accurately.

There are 4 types of lists that you can enter;

Pusher

A pusher list will tell TigerCrossCut to push the stock material into the tool. You can enter as many parts as you like into a pusher list and TigerCrossCut will tell you when it needs another stock material piece. Pusher lists can be optimized if you have the TigerStop Dynamic Optimizing upgrade.

Set Point

A set point list will tell TigerCrossCut to act as a stop. It will treat each length you enter as an absolute value from your zero point. Set point lists can be optimized if you have the TigerStop Dynamic Optimizing upgrade.

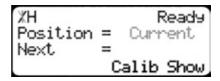
Pattern

A pattern list will tell TigerCrossCut to process one stock lengths worth of parts in a push feed fashion. It will run the same pattern of parts until it's told to stop. Pattern lists cannot be optimized without TigerLink 6 downloading software.

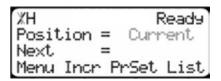
Pull

A pull list works just like a pattern except it pulls away from the zero point instead of pushing towards it. Pull lists cannot be optimized without TigerLink 6 downloading software.

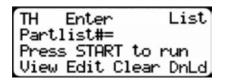
Programming a List



1. From the Ready Screen, press the [Show] soft key to show the menu options.

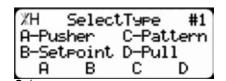


2. A new set of soft key options have appeared. Press the [List] soft key to access the List interface.



3. At the List interface, enter the list number you wish to program and press the [Edit] soft key.

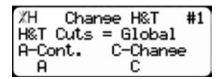
Note: The list number is a memory slot that houses the list. You can choose numbers 1 - 100.



4. Select the type of list you would like to program.

XH Sel	ect Opt	#1
Optimize A-Yes	Part Li:	st?
H-Yes	C-No	
Н	Ü	

 TigerCrossCut will ask you if you want to optimize the list for material yield. If you choose no, TigerCrossCut will process the list exactly as entered and will NOT optimize for material yield.



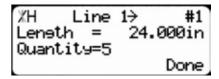
6. Select if you want to use a global or a local head and tail cut. Note: Head and tail cuts are trim cuts at the ends of your material.

Global - Uses the head and tail cut setting from the Part List menu.

Local - Allows you to set a head and tail cut that is used for this list only.

%H Line 1→ #1 Leneth = 0.000in Quantity= 0 Done 7. You will now be taken to the programming screen for line 1. Enter the length of the part you wish to cut and press \checkmark_{cK} .

In this example, I will tell TigerCrossCut I want to cut a 24 inch part.



In this example, I will tell TigerCrossCut that I want 5 parts.

%H {Line 2} #1 Leneth = 0.000in Quantity= 0 Done 9. You will now be taken to line 2. Repeat steps 7 and 8 until you have entered all the parts you want to cut.

Press the [Done] soft key when all parts are entered.

Note: You can also download the parts straight from your design file. Downloading is a faster way of importing parts for use with TigerStop Dynamic Optimization.

%H Complete #1 Part List saved! Press START to run Press CANCEL to exit 11. The list has now been saved.

10.

12. Press **START** to run the list.

Maintenance Schedule

Record the following settings for future reference, after installation is complete.

Serial Number:	Drive Test Results
Min Limit:	MxP =
Max Limit:	MxN =
Scale:	P+ =
Kerf:	P- =
Lash	

Daily

- 1. Clean all dirt and debris from drive areas.
- 2. Check all cables for damage.
- 3. Check calibration and calibrate if necessary. See "Calibrate TigerCrossCut" on page 18.

Monthly

- 1. Blow dust off machine exteriors, especially cable connections.
- 2. Blow out dust from inside the fence extrusion.

Note: When blowing out dust, always blow away from the motor end to the far end of the beam. Always exercise caution when using forced air nozzles.

Quarterly (Every 3 Months)

1. Run a drive test to check machine drive. This should be within 15% of initial values.

Note: The drive test is inside the Debug menu.

Yearly

1. Run a Data Log on the machine at least once a year. From the results, you will know if there is an accuracy problem, and what is causing it (calibration, kerf, lash, scale, etc.).

Note: You can find the data log sheet in the support section of www.tigerstop.com.

Maintenance Log

Date	Maintenance Performed	Drive Test Results

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