

Pin Parking Utility 46734-A 57874-A 47491-A

Table: WIZARD Job: 47491-A Truss: B147491/08

Licensed To: TIPS Demo License PLC Master: Disconnected

**Truss Options**

Adjust Pins  
 Top Adjust  1/16ths  
 Peak Adjust  1/16ths  
 Camber  1/16ths  
 Adjust

Move Pins  
 Move Pins  
 Stop Pins

**Truss Plate Information**  
 Job: 47491-A  
 Truss: B147491/07  
 Qty : Size : Grade  
 8 : MT20 3x6 : 3x6  
 4 : MT18H 7x8 : 7x8  
 4 : MT20 1.5x4 : 1.5x4  
 4 : MT20 3x8 : 3x8  
 4 : MT20 4x4 : 4x4  
 2 : MT20 2.5x4 : 2.5x4  
 2 : MT20 4x5 : 4x5  
 2 : MT20 4x8 : 4x8

# Wizard PDS<sup>®</sup>

## Automated Perimeter Definition System

January 2016

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## Information

When the mouse cursor hovers over a lumber part, it will turn a darker brown color and the cursor will change to a hand. The board part name will also be displayed. Left click while it is dark, and the corners of that board will be highlighted with light green dots, which are then selectable for several features.

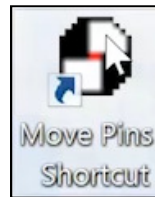
When the cursor is hovered over a connector plate, the cursor changes to a hand and the plate type and size are displayed, but the plate is not selectable.

All pin measurements are made from the **top** of the pin to the **bottom** edge of the table or to a reference mark cut into the bottom of the table.

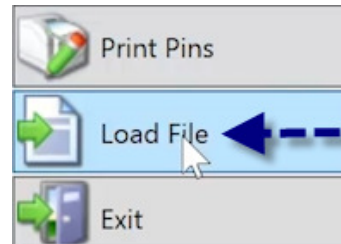
## Operating Procedures

### Basic Operation

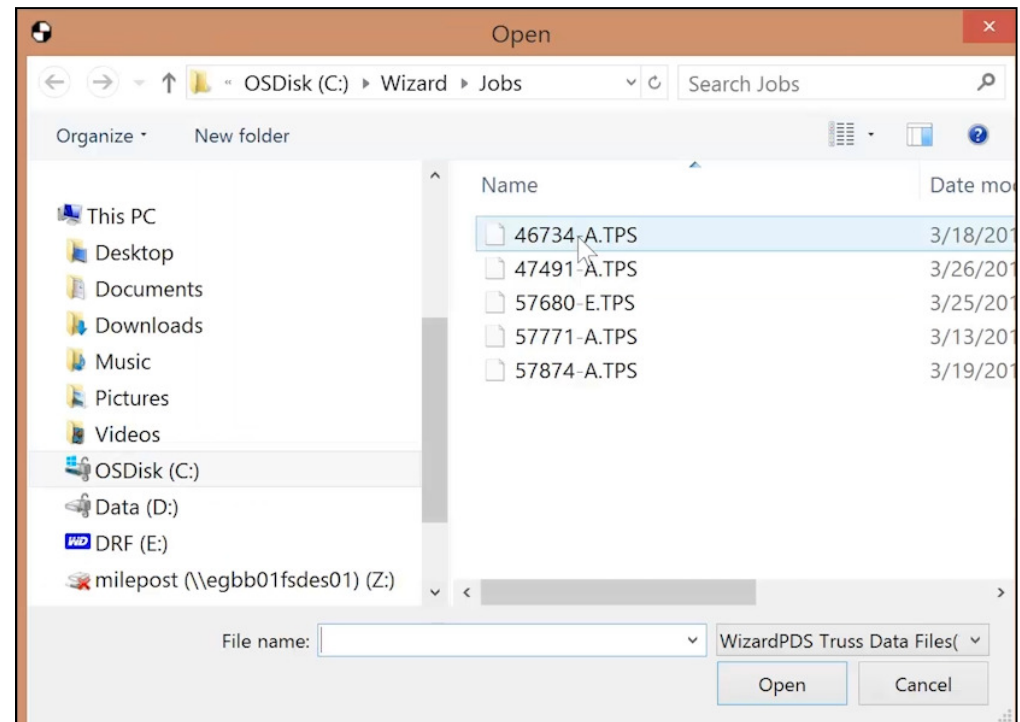
To begin, double click the move pins icon from the desktop screen.



To begin work on a new project, click the load file button in the lower left corner of the screen.



Select the desired truss batch from the list and double left click or left click, then Open.



## Operating Procedures

### Basic Operation (cont)

The first truss in the batch is displayed on the table in the default location.

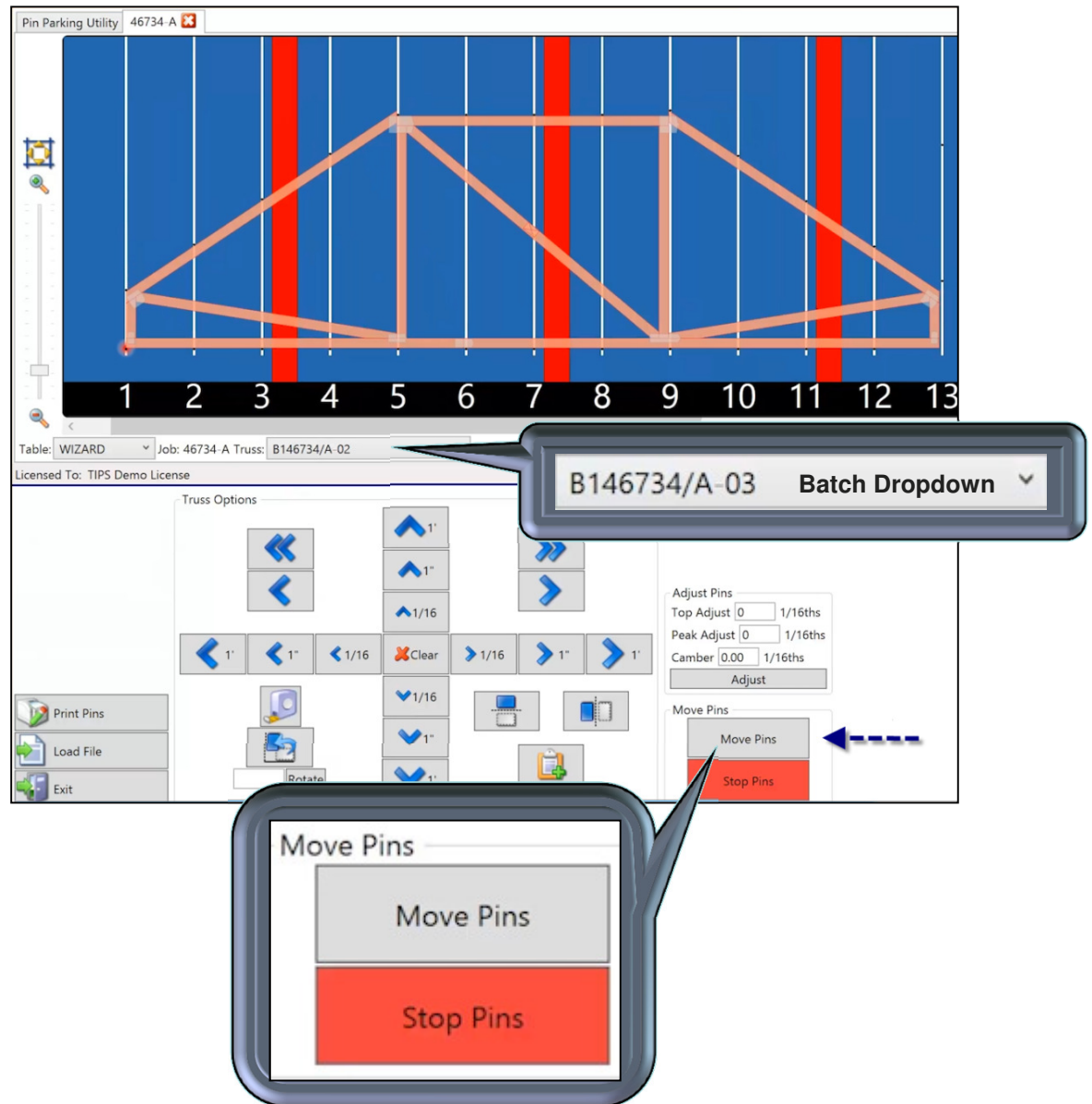
Click the Move Pins button, and the table sets up for that truss.

Once the truss is complete, click the batch dropdown box and select the next truss in the batch.

Notice the red highlighted halo on the lower left in this example. This indicates that the corner of that member is centered on the pin in rail #1.

The red Stop Pins button can be pressed anytime to stop the pins from moving. This can be used if the Move Pins button is pressed and there is still lumber or a truss on the table.

Move the pins by clicking the move pins button.

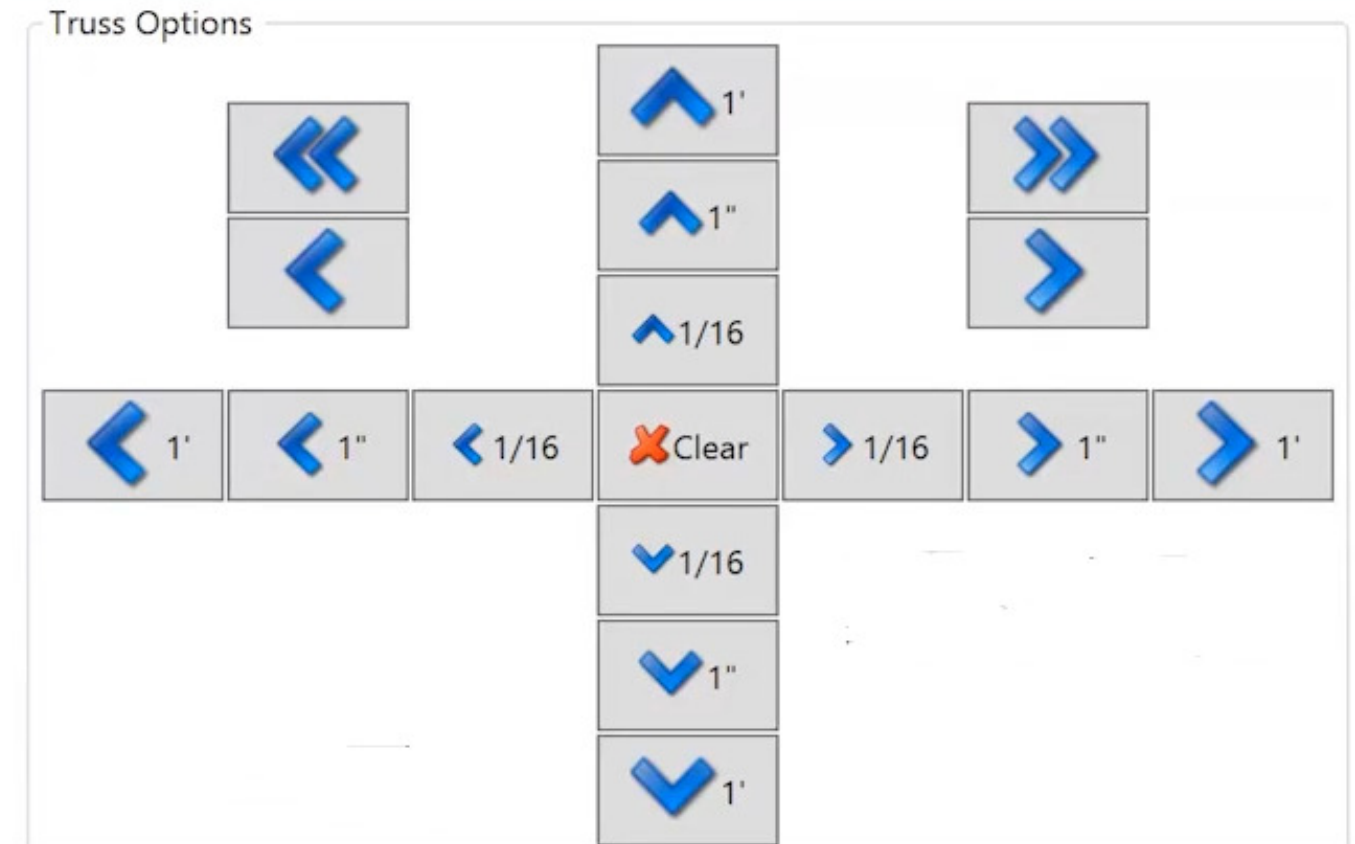


## Operating Procedures

### Manually Reposition a Truss

After loading a truss, it is displayed at the default location on the table.

To adjust the location of the truss, one option is to use the truss option arrows below the table.



## Operating Procedures

### Manually Reposition a Truss (cont)

Clicking the left or right double arrow will move the truss completely to the left or right end of the table.



You can also move the truss one rail at a time, to the left or right, by clicking the single arrow pointing to the left or right.



You also have the option to move the truss right, left, up and down by one foot, one inch, or 1/16 of an inch.

**NOTE:** These options are used to accommodate fabricator preference or to create a better fit of a truss on the table if needed

To clear these options click the **Clear** button.

This will position the truss in the starting default location.

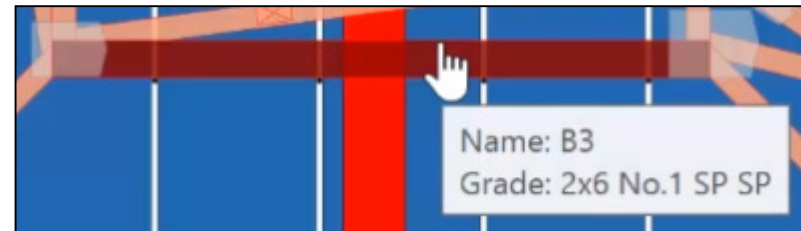


## Operating Procedures

### Snap to Rail Centerline

To relocate the truss by using a member corner snap to a pin centerline:

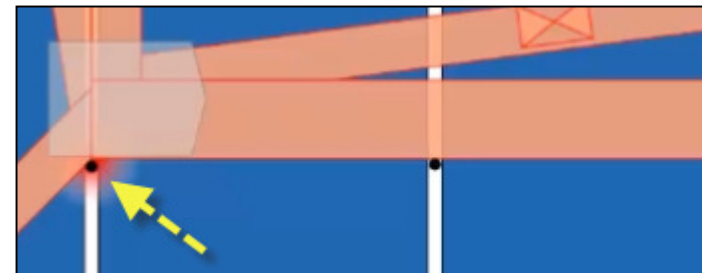
Left click to highlight the member. It will turn dark.



Once it is highlighted the corners have selectable points.



Select the corner of the piece you want on a centerline and it automatically snaps that point to the closest pin centerline.



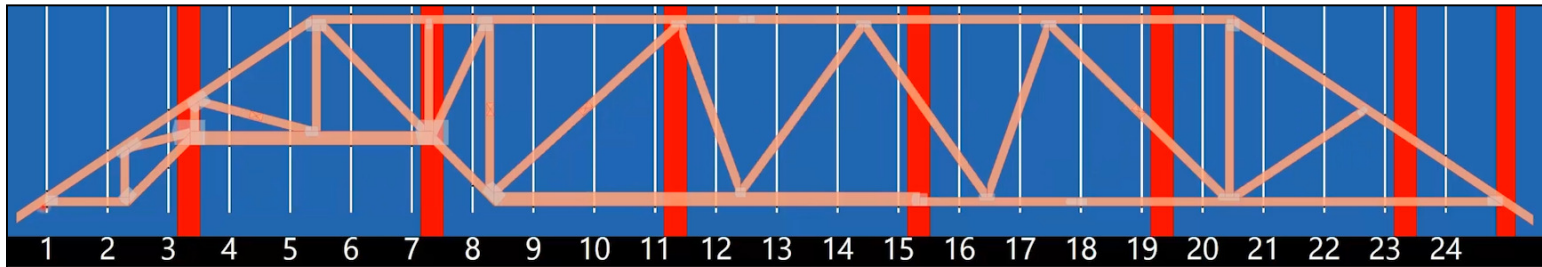
Notice that the red halo has moved to indicate which pin centerline is the reference pin.



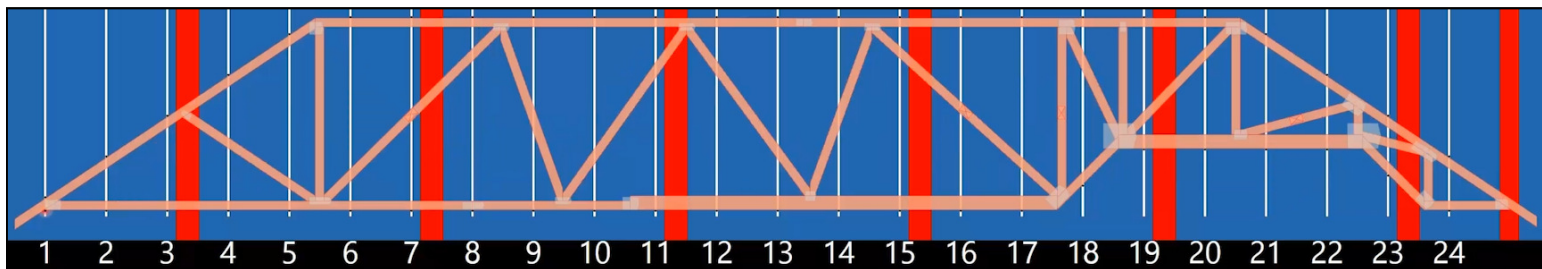
## Operating Procedures

### Flip a Truss

To flip the orientation of the truss horizontally:



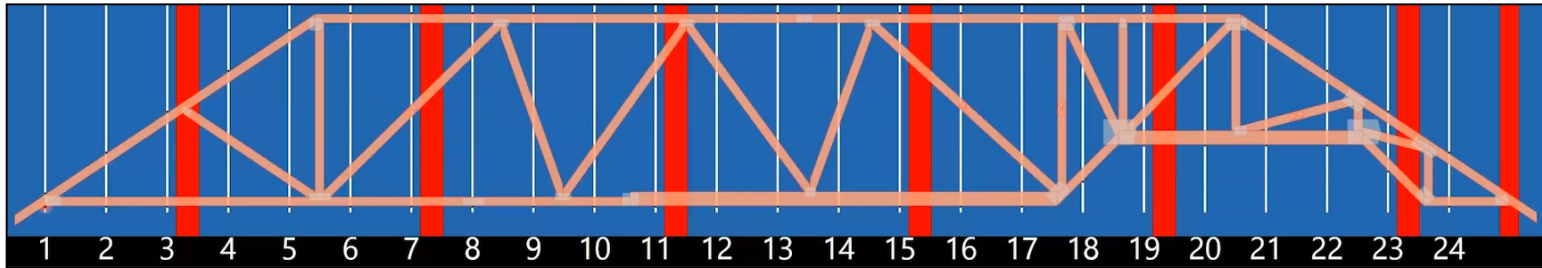
Click the horizontal flip button located in the truss options screen.



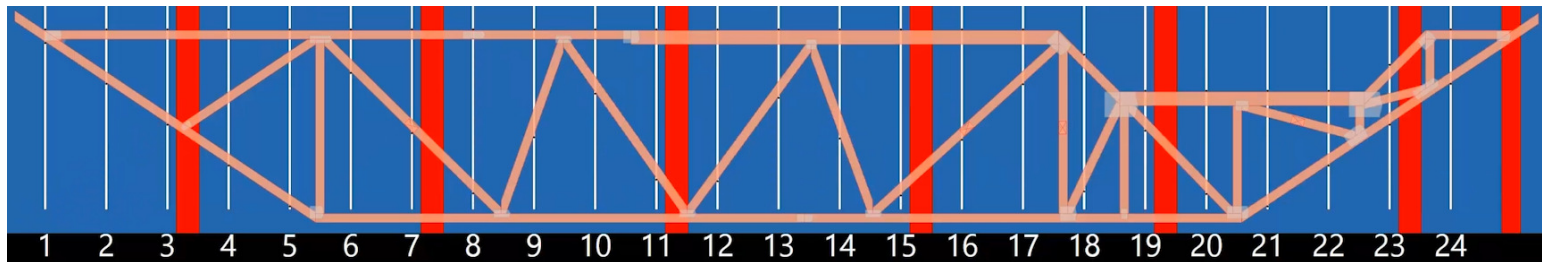
## Operating Procedures

### Flip a Truss (cont)

To flip the orientation of the truss vertically:



Click the vertical flip button located in the truss options screen.



**NOTE:** These options are mainly used to position the truss according to the fabricator's preference.

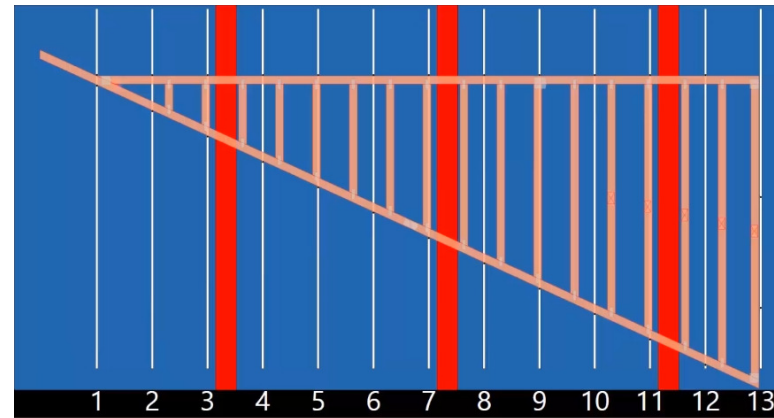
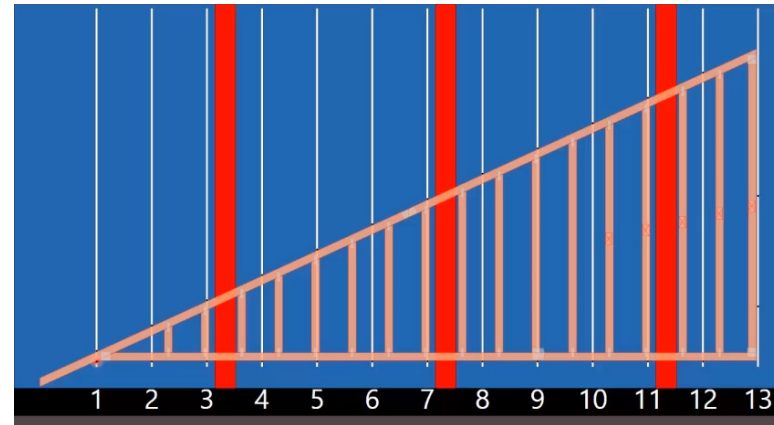
## Operating Procedures

### Rotate a Truss

Rotating a truss is typically done to allow fabrication of a truss that is too tall for the table in the default orientation.

#### For the first method of rotating a truss:

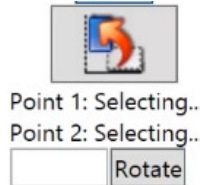
Begin by flipping the truss vertically using the vertical flip button located in the truss options screen.



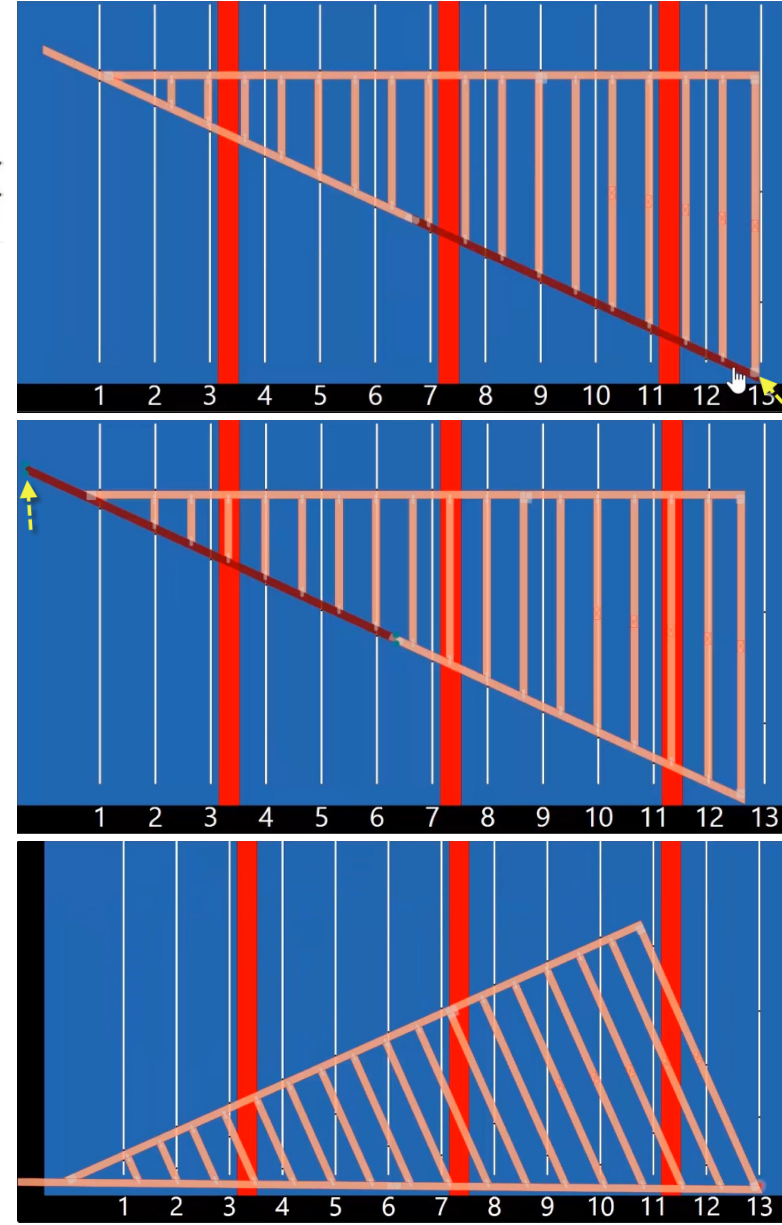
## Operating Procedures

### Rotate a Truss (cont)

Select the rotate truss button in the lower left corner:



1. Highlight the board that has your intended rotation point. Left click the board and select the desired corner, indicated by the yellow arrow, as the pivot point.
2. Select the next board, left click and select the desired corner, indicated by the yellow arrow, as the horizontal point.
3. The truss then aligns these two points parallel with the edge of the table.



## Operating Procedures

### Rotate a Truss (cont)

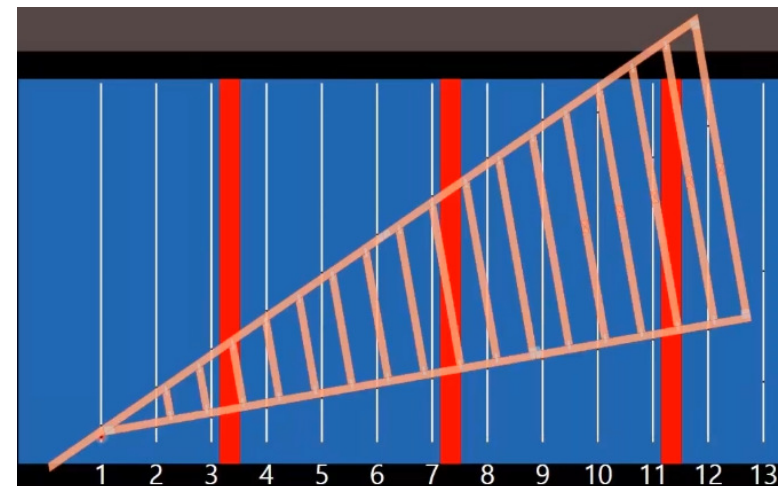
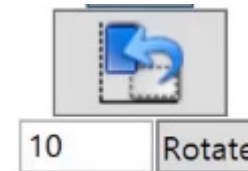
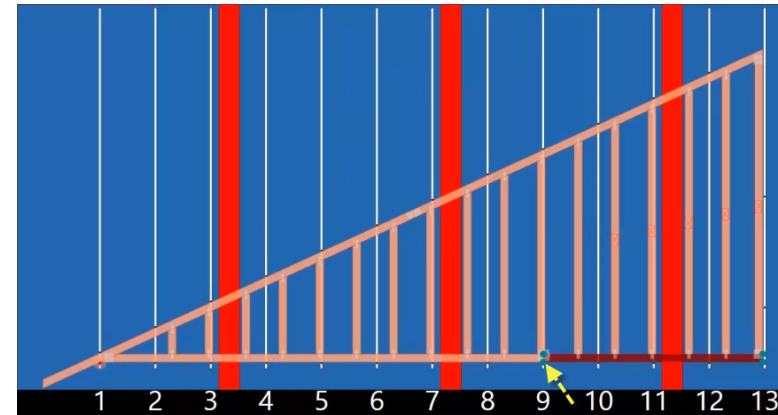
For the second method of rotating a truss:

Notice which point has the red halo. This will be the rotation pivot point. You can change this rotation point by selecting the board and the corner point prior to beginning the rotation.

Below the rotate truss button, enter the number of degrees you would like the truss to be rotated.

Each time you click the rotate button, the truss rotates by the specified amount of degrees.

**NOTE:** A positive number rotates the truss counter-clockwise. A negative number rotates the truss clockwise.



## Operating Procedures

### Setup Multiple Jigs

Because the Wizard PDS® only changes pins that are touching the truss with the current focus, you are able to set up multiple jigs on the same table.

In this example, when the truss is loaded at the default location, click Move Pins.

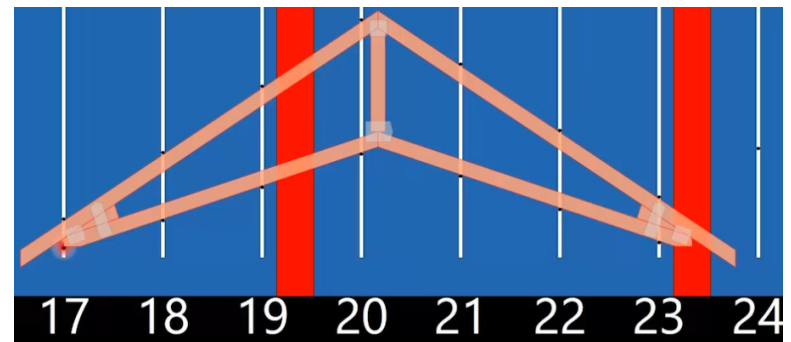
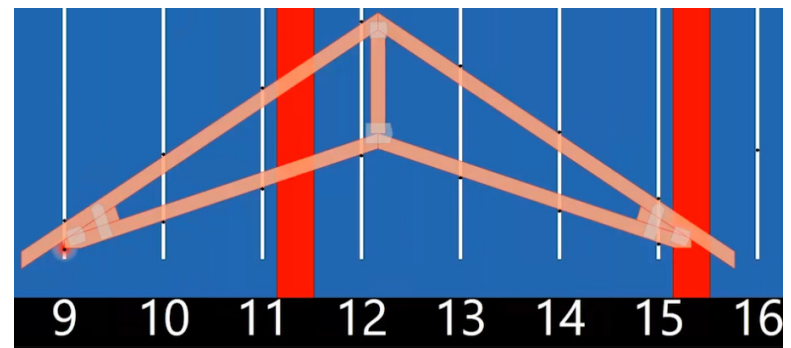
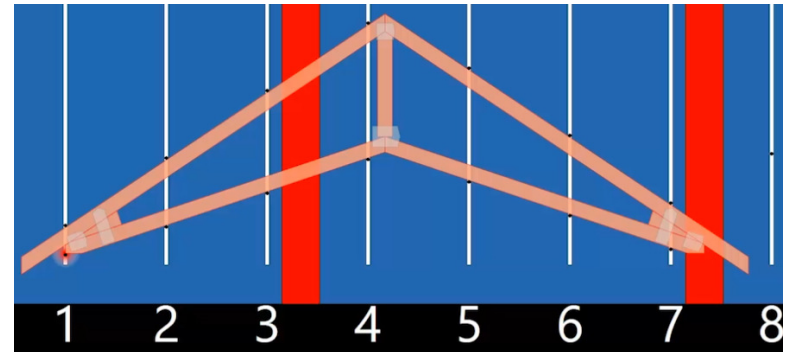
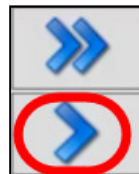
This sets up a truss jig between rail 1 and rail 8.

Now click the single right arrow button, moves the setup one rail per click, and move the truss down the table to between rail 9 and 15 and click Move Pins.

Repeat this between rails 17 and 23.

You now have 3 jigs to build trusses.

Different trusses from the same or different batches can be set up this way also.



## Operating Procedures

### Click and Drag a Pin

#### To select and drag a pin:

Move the cursor over the pin you would like to adjust.

Once the cursor changes to a plus symbol, hold down the left mouse button and drag the pin near the new location.

Once you release the pin, it snaps into place at the edge of the nearest board.

**NOTE:** This can be used to create web stops to help orient the webs while the truss is being built.

To move a pin without the “snap to nearest edge” feature, hold down the right mouse button and drag. The pin will stay where it is when you release the right mouse button.

**NOTE:** The pins on the table do not move until the Move Pins button is pressed!



## Operating Procedures

### Pin Option Box

Moving the pins using the pin option box allows precise movement of a pin. It can allow a member to fit in the jig, even if it was not cut perfectly.

When the system first loads, there is no dialogue box for an individual pin.

Once again, you can hover over the pin to move, until the cursor changes to a plus.

Click the pin and the dialogue box appears with its current location.

In the dialogue box you are now able to adjust the individual pin 1/16<sup>th</sup> of an inch at a time with each click of the up or down arrow.

You are also able to place the pin by typing in an exact location in the dialog using the ff-ii-ss method.

When you enter a value, you must click the Move button to reposition it on the screen.

Pin Options

Move To

2-3-14

Adjust Pins

Top Adjust  1/16ths

Peak Adjust  1/16ths

Camber  1/16ths

Move Pins

**NOTE:** The pins on the table do not move until the Move Pins button is pressed!

**NOTE:**



## Operating Procedures

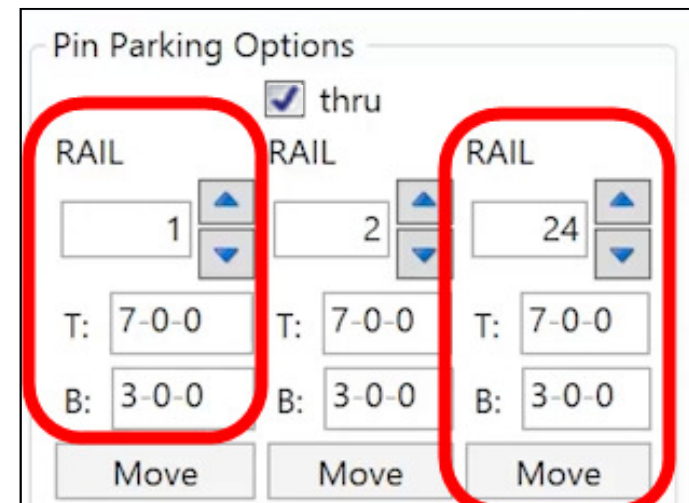
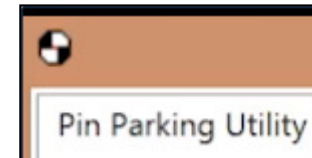
### Pin Parking

Select the **Pin Parking Utility** in the upper left corner. This screen is the default screen and is always available.

To check the entire table accuracy, Park all of the pins by selecting the **thru** box checkmark in the lower left and changing the beginning rail in the left column and ending rail number in the right column. Press the **Move** button below the third column to move the rails.

Move to the end of the table and visually sight down the pins. Any pins out of calibration will be clearly visible.

The three columns can be used to facilitate moving pins for lubrication purposes. An example would be the first column set to move the pins to the top of the table, the second column would move them to the bottom, and the third would park them in the middle. This ensures full and complete lubrication of the screws.



## Operating Procedures

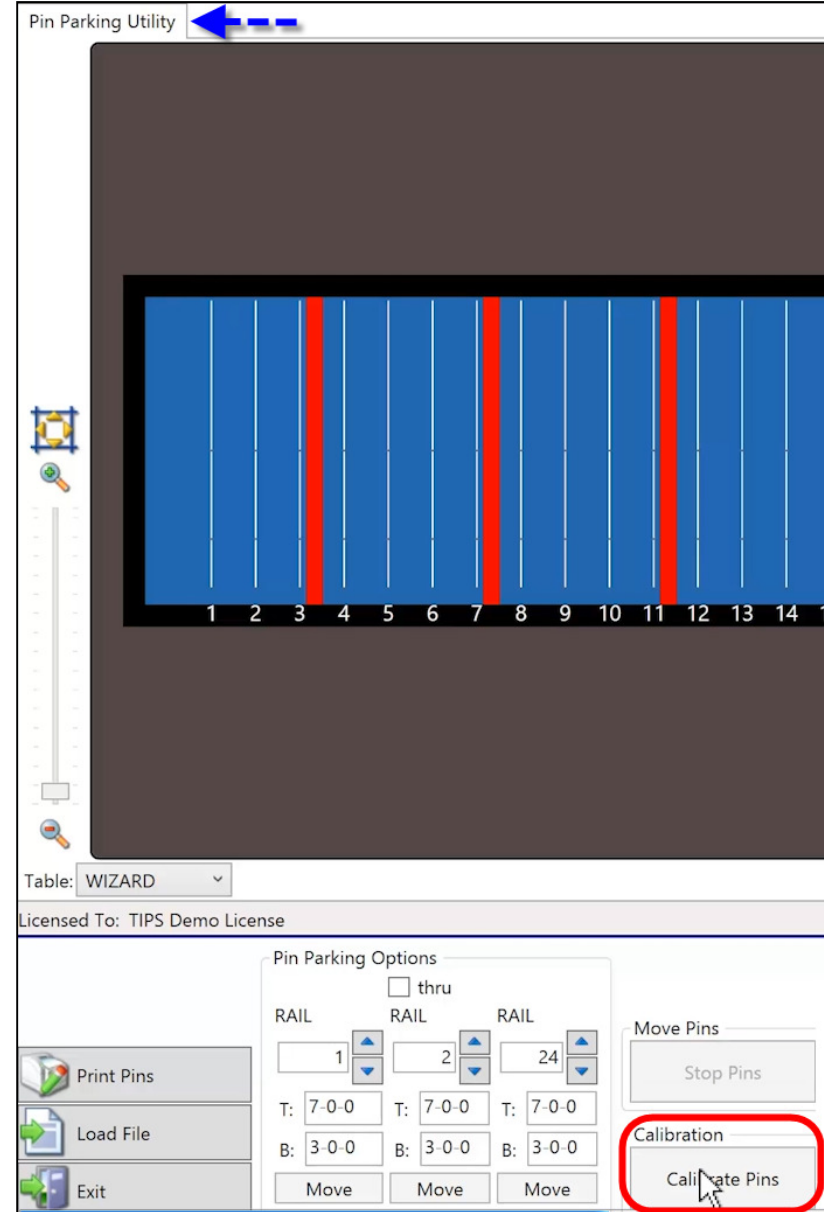
### Calibrating Pins

#### To calibrate the pins:

Navigate to, and click, the **Pin Parking Utility** in the top left corner of the screen.

Next, click on the **Calibrate Pins** button, and

Click **OK** on the warning.



Pin Parking Utility

Table: WIZARD

Licensed To: TIPS Demo License

Pin Parking Options

thru

RAIL 1 RAIL 2 RAIL 24

T: 7-0-0 T: 7-0-0 T: 7-0-0

B: 3-0-0 B: 3-0-0 B: 3-0-0

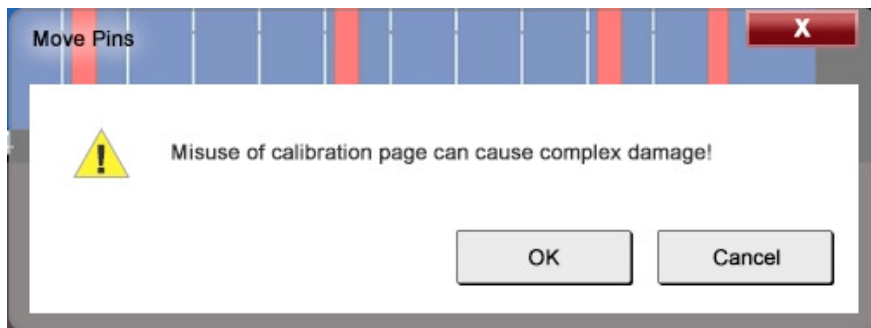
Move Move Move

Move Pins

Stop Pins

Calibration

Calibrate Pins



Move Pins

Misuse of calibration page can cause complex damage!

OK Cancel

## Operating Procedures

### Calibrating Pins (cont)

When the calibration page appears, you can select the rail to work with by either scrolling through the rails or typing the exact rail you would like to work with:

**NOTE:** The top section is for the top pin and the bottom section for the bottom pin.

Pins Calibration X

Rail: 24

Top

Counts: 19808 0 Set Move

Inches: 13-9-12 0 Set Move

Bottom

Counts: -26399 0 Set Move

Inches: 1-0-0 0 Set Move

## Operating Procedures

### Calibrating Pins (cont)

The dialogue box will display the pin location according to the computer data.

Measure the pin location on the table and compare it to the dialogue box. Always measure from the TOP of the pin.

Bottom

Counts:	<input type="text" value="-26399"/>	<input type="text" value="0"/>	<input type="button" value="Set"/>
			<input type="button" value="Move"/>
Inches:	<input type="text" value="1-0-0"/>	<input type="text" value="0"/>	<input type="button" value="Set"/>
			<input type="button" value="Move"/>



## Operating Procedures

### Calibrating Pins (cont)

If the actual pin measurement is not the same as the display, enter the actual dimension and press the Set button. The computer data will reset accordingly.

After the “Pin Calibration is Complete” message appears, click OK to confirm.

If desired, you may then input the desired location and press the Move button. After the pin moves, verify the location.

Bottom

Counts:	<input type="text" value="-26399"/>	<input type="text" value="0"/>	<input type="button" value="Set"/>
			<input type="button" value="Move"/>
Inches:	<input type="text" value="1-0-0"/>	<input type="text" value="1-0-8"/>	<input type="button" value="Set"/>
			<input type="button" value="Move"/>



## Operating Procedures

### Add Camber

A camber is an arch that is placed in a truss that compensates for anticipated deflection when a truss is placed under a load.

Use the camber dialog box to enter the amount of camber required and then click adjust. The ADJUST button only changes the screen image, the pins do not move until the Move Pins button is pressed!

For this demonstration we will use a one inch or 16/16 camber.

In the camber dialogue box type in 16, then click adjust.

This will adjust the pins from the middle of the truss out to the ends to create an arc.

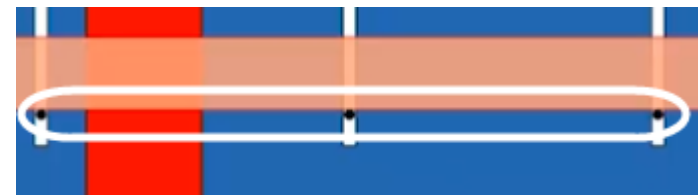
Both the top and bottom pins will move the same amount.

To remove the camber type in 0 and click adjust. The pins are now back to the original position.

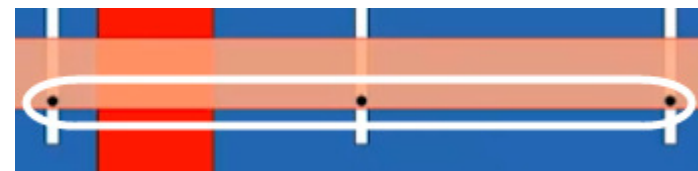
Note that the image of the truss does not change. This is to make visualization of changes easier to see.

**NOTE:** The pins on the table do not move until the Move Pins button is pressed!

Adjust Pins  
Top Adjust 0 1/16ths  
Peak Adjust 0 1/16ths  
Camber 16.0 1/16ths  
Adjust  
Move Pins  
Move Pins  
Stop Pins



Without Camber

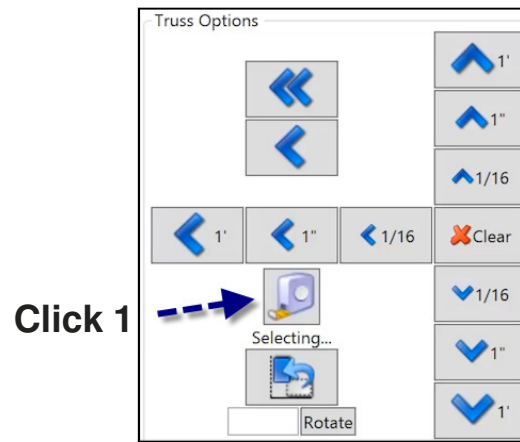


With Camber

## Operating Procedures

### Tape Measure

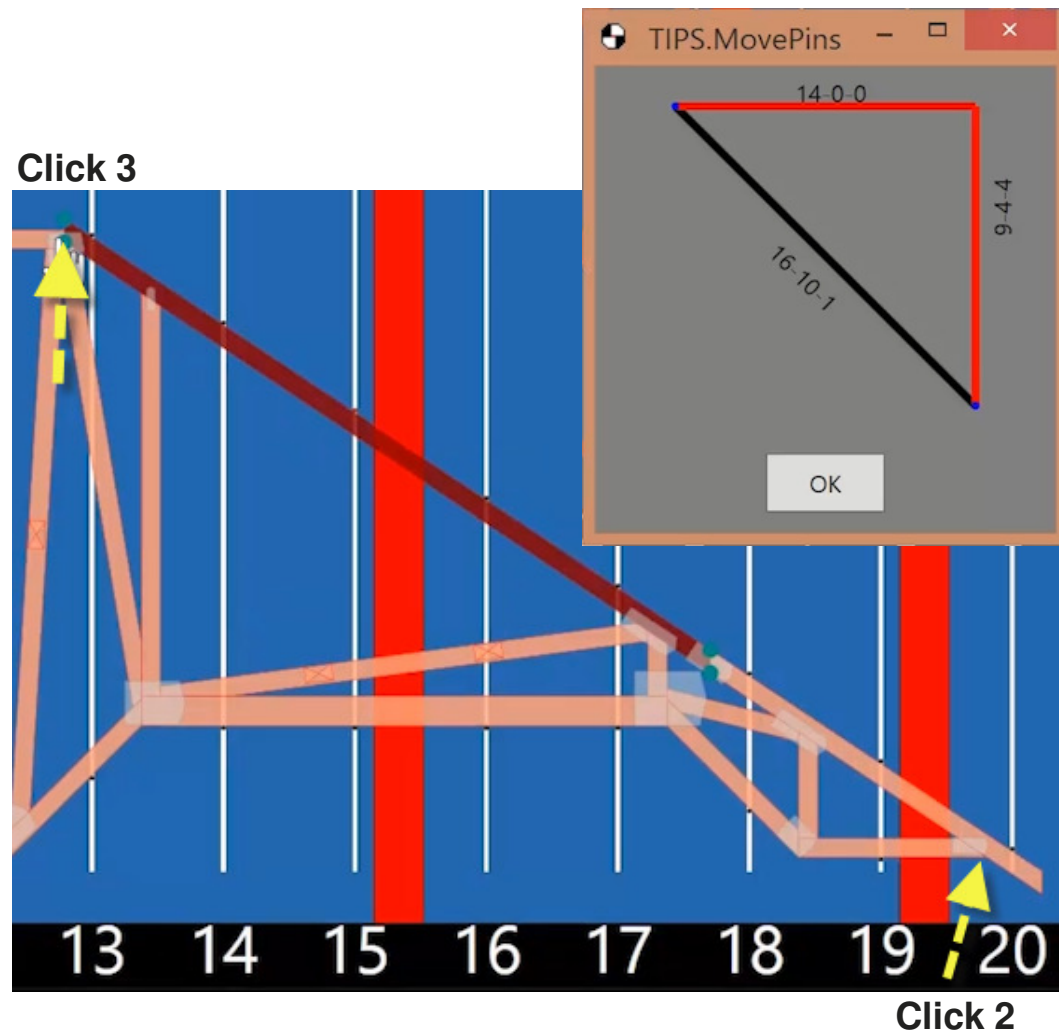
1. Click on the tape measure icon, it will say "selecting."



2. Highlight a board and select the point you want to measure from.
3. Highlight a second board and select the point you would like to measure to.

The vertical, horizontal, and diagonal dimension are then displayed.

This can also be used for measuring the length of a cut part



## Operating Procedures

### Top Chord Adjust

The top chord and peak adjust features are used when the members are not cut perfectly or if you are using large members such as 2 x 8 or 2 x 10 that have varying widths.

You can adjust the top chord by typing a positive or negative number into the dialogue box.

In this example the top chord will be adjusted upwards by one inch.

To accomplish this adjustment, type 16 into the dialogue box and click Adjust.

All of the top chord pins from the heel to the peak moved up one inch on the display.

The truss image is still in the original shape to help visualize the change.

**NOTE:** These changes can affect the shape and pitch of the truss. Use only within your company quality guidelines!

**NOTE:** The pins on the table do not move until the Move Pins button is pressed!

Adjust Pins

Top Adjust 16.0 1/16ths

Peak Adjust 0 1/16ths

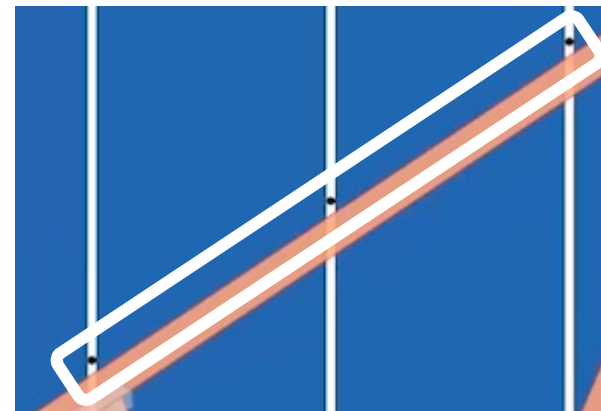
Camber 0.00 1/16ths

Adjust

Move Pins

Move Pins

Stop Pins





## Operating Procedures

### Peak Adjust

To adjust the peak height, type in a positive or negative number in the peak adjust dialogue box, then click adjust.

In this example the peak was raised by one inch.

Peak adjust only alters the height of the peak.

The pins at the heel of the truss are still in their original location.

You can also combine both features by adjusting the top chord by one inch and lowering the peak by one inch.

This will raise the heel of the truss while keeping the original height of the truss.

Adjust Pins

Top Adjust 0 1/16ths

Peak Adjust 16. 1/16ths

Camber 0.00 1/16ths

Adjust

Move Pins

Move Pins

Stop Pins

**NOTE:** These changes can affect the shape and pitch of the truss. Use only within your company quality guidelines!

**NOTE:** The pins on the table do not move until the Move Pins button is pressed!

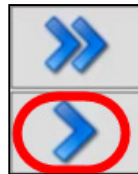
## Operating Procedures

### Hold Orientation

Hold Orientation is used to load the batch of trusses somewhere other than the default location on the table.

In this case we will move the truss over 2 rails and up one foot.

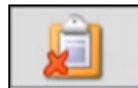
Click the single right arrow 2 times (equals 2 rails).



Click the Up 1' arrow 1 time (equals 1').



Now select the Hold Orientation Clipboard, and a **red X** will appear.



The remaining trusses in this batch will now be loaded at this location and not the default location.

To reset the orientation click on the Clipboard again, and the trusses will return to the default location.

## Operating Procedures

### Truss Plate Information

The connector plate information for trusses is located on the right side of the screen.

When a truss is selected, the plate information box automatically brings up the information for the next truss in the batch.

The dialogue box displays the quantity, size, and grade of the plates needed for the next truss.

In this demonstration, if we select truss A-03 the Truss Plate Information box displays the plates needed for truss A-04, the next truss in the batch.

This allows for the gathering of plates for the next truss while the current truss is being built.

Any truss in the batch may be selected at any time.

● PLC Master: Disconnected

Truss Plate Information

Job: 46734-A

Truss: B146734/A-03

Qty : Size : Grade

6	: MT20 3x6	: 3x6
6	: MT20 3x8	: 3x8
4	: MT20 2.5x4	: 2.5x4
2	: MT20 4x4	: 4x4
2	: MT20 6x12	: 6x12
2	: MT20 6x6	: 6x6

● PLC Master: Disconnected

Truss Plate Information

Job: 46734-A

Truss: B146734/A-04

Qty : Size : Grade

24	: MT20 3x6	: 3x6
16	: MT20 2.5x4	: 2.5x4
16	: MT20 3x8	: 3x8
16	: MT20 4x4	: 4x4
8	: MT20 4x5	: 4x5

## Quiz 1

1. After loading a truss, it is displayed at which location
  - a) Any selected pin
  - b) The default location
  - c) Any selected rail
  - d) The peak
  
2. A highlighted member can be snapped to a rail centerline by selecting the corner of the member
  - a) T
  - b) F
  
3. When rotating a truss a positive number will rotate the truss a clockwise direction
  - a) T
  - b) F
  
4. After moving pins on the table you must press the Move Pins button to complete the changes
  - a) T
  - b) F
  
5. Hold Orientation is used to load a batch of trusses someplace other than the default location on the table
  - a) T
  - b) F