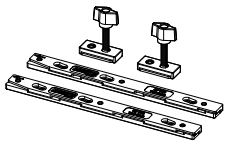
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ZeroPlay® Miter Bar System
User Manual

For creating precision shop-built sleds and jigs.



Double Kit
ZP750-B2S2



Miter Bar
ZP750-B1



Miter Stop
ZP750-S1

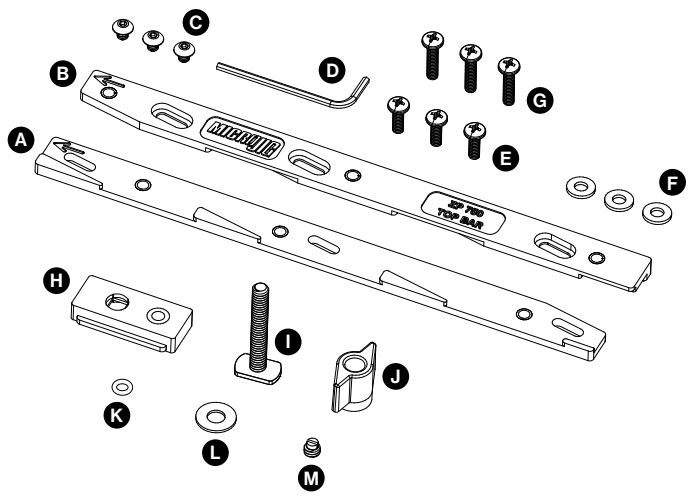
⚠ WARNING

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Parts List

#	Miter Bar Parts	Qty	Part #
A	Bottom Bar (with wedges)	1	ZP750-P1
B	Top Bar (with logo)	1	ZP750-P2
C	#8-32 x 3/16" button head screw	3	ZP-H1-EH
D	3/32" hex key	1	ZP-H2-EH
E	#8-32 x 1/2" pan head screw	3	ZP-H3-EH
F	#10 flat washer	3	ZP-H4-EH
G	#8-32 x 3/4" pan head screw	3	ZP750-H19-EH

#	Miter Stop Parts	Qty	Part #
H	Miter Stop	1	ZP750-P3
I	1/4"-20 x 1-3/4" T-bolt	1	GR-H12-EH
J	1/4"-20 yellow wing knob	1	ZP-H6
K	5/16" OD O-ring	1	ZP-H7
L	1/4" x 1/2" flat washer	1	ZP-H8-EH
M	Nylon 1/4"-20 x 1/4" set screw	1	ZP-H9



Required Tools (Not included)



Phillips screwdriver | Flathead screwdriver

Instructions

Make sure that your table saw is properly tuned and maintained before using the ZeroPlay™ System. It is important that the rip fence is exactly parallel with the blade. Perform all steps as accurately as possible.

Miter Bar adjusts from 0.72" to 0.78" (18.3mm–19.8mm) wide. Push the bottom bar away from the top bar to decrease width [Fig 1a]. Push the bars together to widen [Fig 1b].

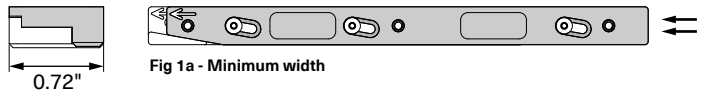


Fig 1a - Minimum width

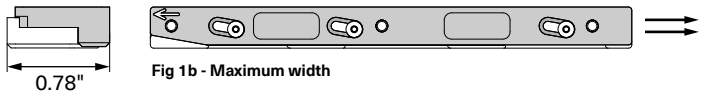


Fig 1b - Maximum width

Step 1 – Assemble Hardware

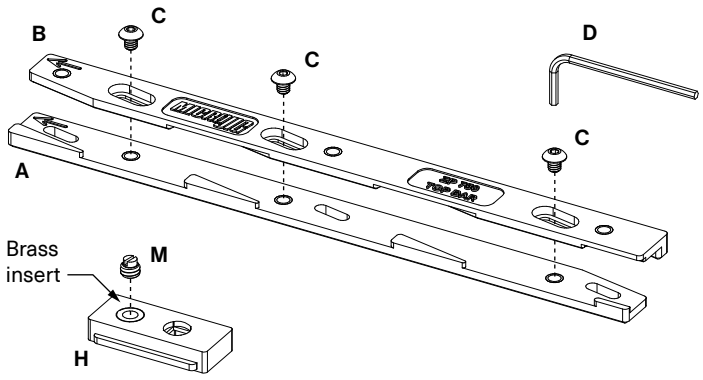
1.1 Stack the Top Bar (B) on top of the Bottom Bar (A). The arrows should be facing upwards and in the same direction.

1.2 Insert (3x) button head screws (C) through the counterbored slots in the Top Bar as shown below. Loosely secure both bars together using the hex key (D).

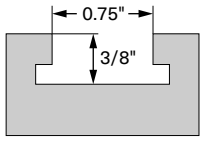
1.3 Adjust the bars to the narrowest setting [Fig 1a] and lightly tighten the screws.

Miter Stop *only*

1.4 Insert the nylon set screw (M) into the brass insert of the Miter Stop (H) with a small flathead screwdriver.

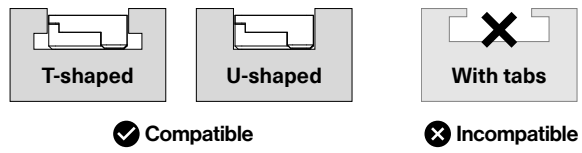


Compatibility

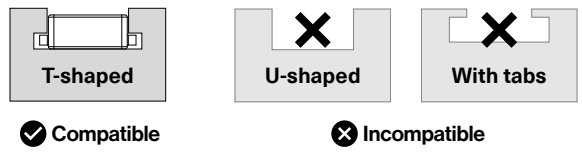


Fits most standard 3/4" miter slots on table saws, router tables, band saws, or stationary sanders. Minimum miter slot depth of 5/16" (7.94mm) required.

Miter Bar compatible miter slot types



Miter Stop compatible miter slot types



Step 2 – Mark & Drill Sled Base

Layout ZeroPlay® holes and other sled features before drilling or cutting.

2.1 Draw a center line where the Miter Bar will be mounted to the sled.

2.2 Mark a point for the first mounting hole (≥1" from the top edge) and label it M1(closest to the arrows). Mark two more mounting holes 4" (101.6mm) apart and label them M2 and M3 [Fig 2a].

2.3 Starting from M1, mark three adjustment holes 1-1/16" (27mm), 3-5/16" (84.1mm), and 7-5/16" (185.7mm) backwards along the center line. Label them A1, A2, and A3 [Fig 2b].

2.4 Drill 3/4" (19mm) through holes at A1, A2 and A3.

2.5 Drill 1/2" (12mm) diameter counterbores 5/16" (8mm) deep at M1, M2, and M3. Then drill 1/4" (6mm) through holes at each mounting hole (M1, M2, M3) through the center of the counter bore [Fig. 2c].

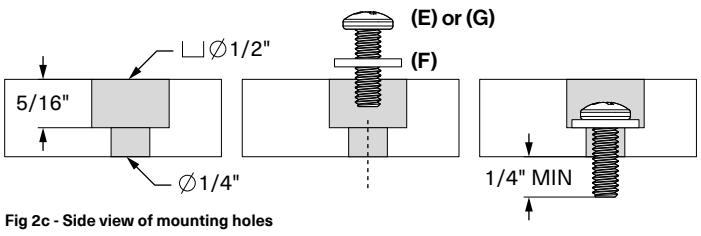


Fig 2c - Side view of mounting holes

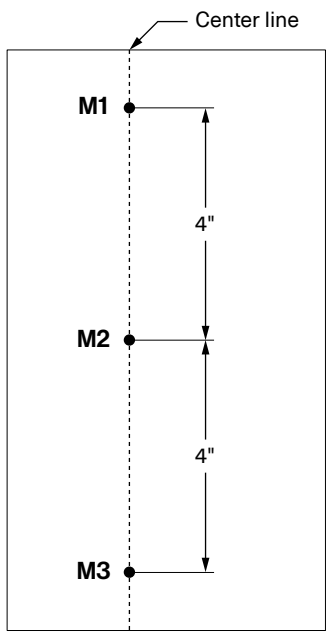


Fig 2a - Mounting hole locations

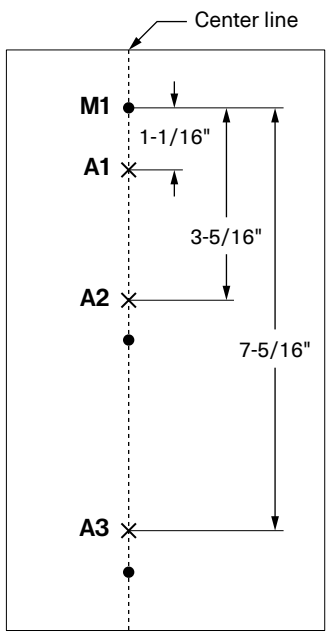


Fig 2b - Adjustment hole locations

Step 3 – Mount Miter Bar

3.1 Using a philips screwdriver, attach the Miter Bar to the bottom of the sled using **either**:
- For 1/2" thick sled bases: (3x) 1/2" pan head screws (E) OR
- For 3/4" thick sled bases: (3x) 3/4" pan head screws (G)

Insert the pan head screws with flat washers (F) through each mounting hole (M1, M2, M3) and tighten [Fig 3a].

3.2 Each adjustment slot should be visible through the adjustment holes (A1, A2, A3) drilled in Step 2.4.

3.3 Place the sled base on top of your table saw surface so the Miter Bar is set into one of the miter slots. Push the sled to the right so the Miter Bar is firmly against the inner wall of the miter slot [Fig 3b].

3.4 Using the hex key (D), loosen the 3 button head screws in the Miter Bar through the adjustment holes [Fig 3c].

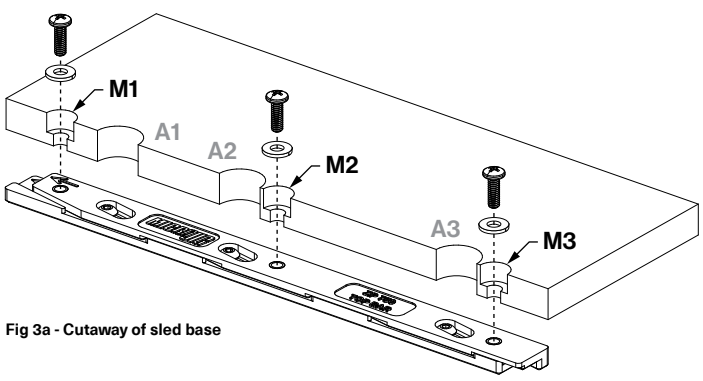


Fig 3a - Cutaway of sled base

3.5 Use the hex key to gently slide one of the button head screws downwards so the Miter Bar expands to completely fill the miter slot. Then, tighten each button head screw [Fig 3d.]

3.6 Test the Miter Bar fit by sliding the sled along the miter slot. It should slide freely with no side-to-side play. Repeat the previous steps if the fit is too tight or too loose .

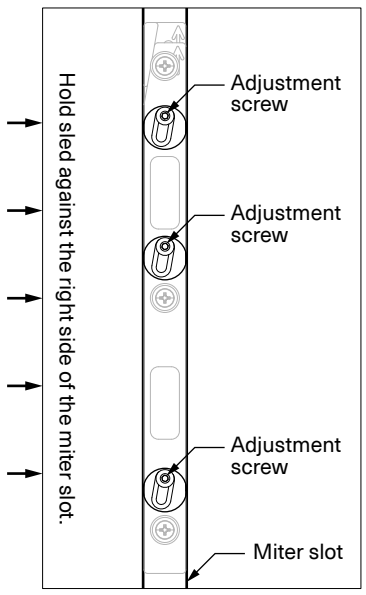


Fig 3b - Top view of assembled sled

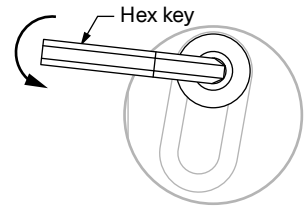


Fig 3c - Loosen button head screws

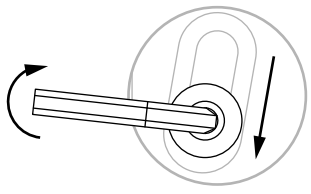


Fig 3d - Slide to calibrate fit, then tighten

Step 4 – Square sled

4.1 Move the rip fence so it touches the side of your sled base and lock the fence in place. The fence position should be close to or slightly past the saw blade [Fig 4a].

4.2 Partially loosen the three mounting screws and push the sled base firmly against the rip fence. Make sure the sled is square (90º) to the rip fence and retighten each mounting screw [Fig 4b–4d].

4.3 If the sled base is set slightly past the saw blade, cut the edge to create a zero-clearance fit.

TIP: Use two ZeroPlay™ Miter Bars inline (one in front of the other) for deep projects like panel cutting sleds, or in paralell (one in each miter slot) for wider bases like crosscut sleds.

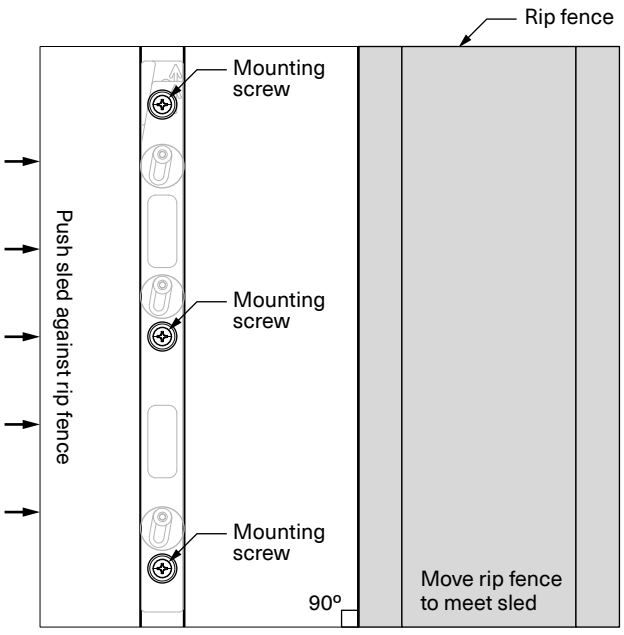


Fig 4a - Top view of sled and rip fence

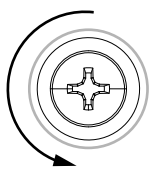


Fig 4b - Loosen screws

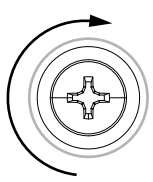


Fig 4d - Tighten screws

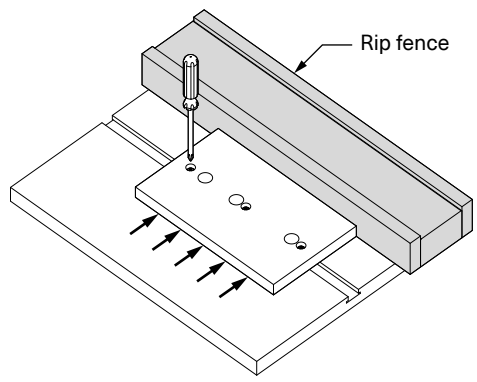


Fig 4c - Push sled against rip fence

Miter Bar Drill Guide

For use with the ZeroPlay™ Miter Bar System

Use center punch, nail, or pin to mark centers of all 6 holes (M1, M2, M3, A1, A2, and A3).

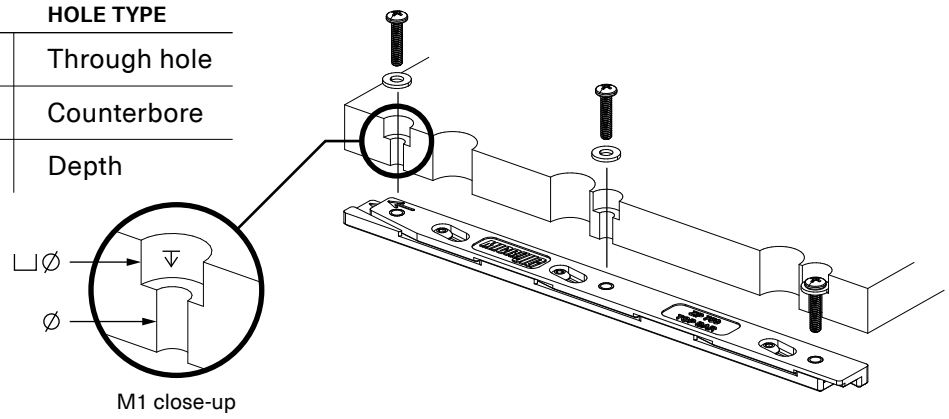
–OR–

Copy drawing at 1:1 scale to use as a template.

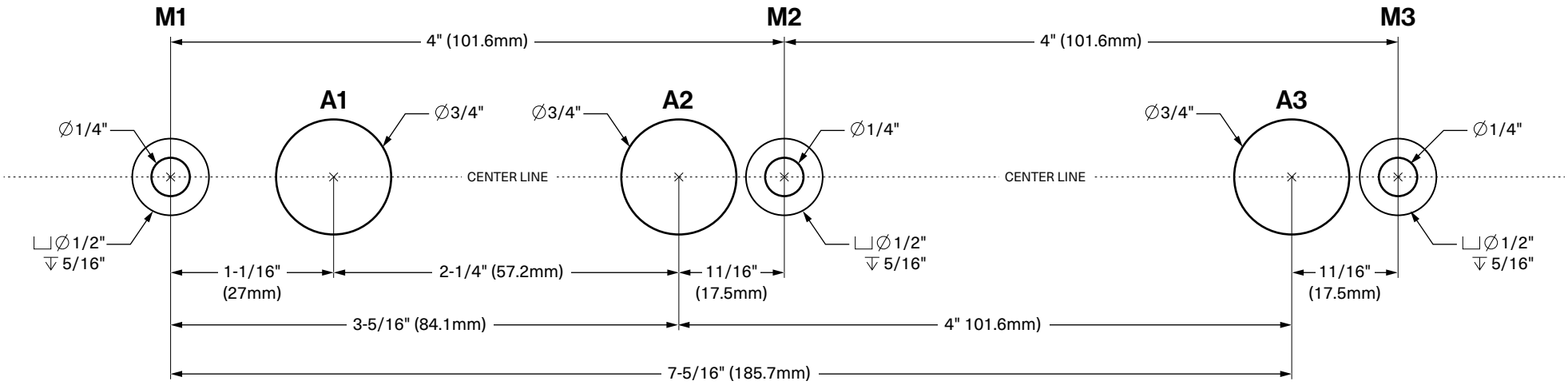
Download printable file at: **microjig.com/zp-drill-guide**

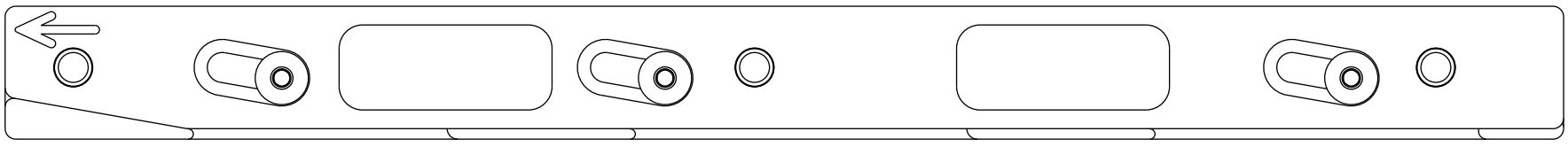
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SYMBOL	HOLE TYPE
∅	Through hole
⌴∅	Counterbore
↧	Depth



M1 close-up





ZeroPlay™ Miter Bar [top-down view]

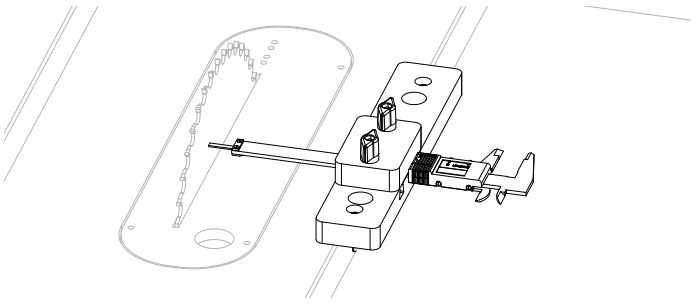


Inch Scale for Reference

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ZeroPlay® Miter Bar
Saw Setup Jig Plans

For setting and fine tuning your miter slot, saw blade, and rip fence.



⚠ WARNING

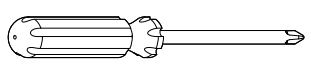
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Parts List

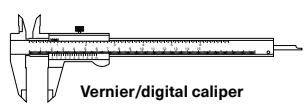
#	Saw Setup Jig Parts	Qty
A	Jig Base: 10" x 2" x 3/4" (250mm x 50mm x 18mm)	1
B	Clamp Plate: 3" x 2" x 3/4" (76mm x 50 x 18mm)	1
C	ZeroPlay™ Guide Bar	1
D	1.5" MatchFit™ Track Screws with wing knobs	2
E	360 Sled Kit (substitute for parts **C** + **D**)	1

Wood types: void-free plywood (e.g. Baltic birch), standard MDF, or seasoned solid wood.

Required Tools (Not included)



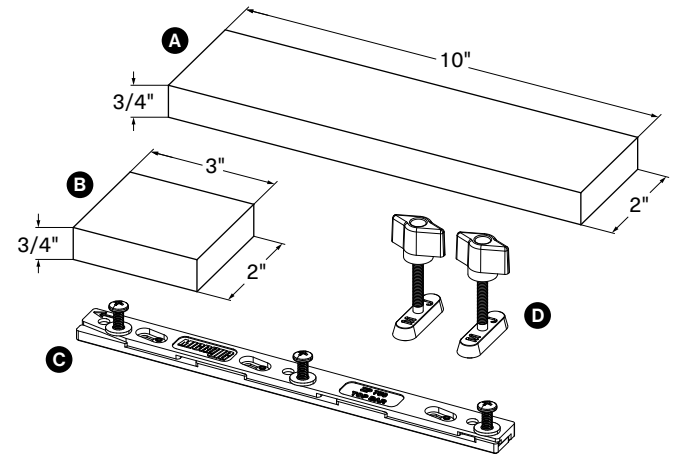
Phillips screwdriver



Vernier/digital caliper

To be safe and accurate, your saw must be set up correctly and as precisely as possible. This simple jig helps you set and fine tune your saw to get the best possible cuts from it.

The jig holds a digital or vernier caliper as it slides up and down the miter slot so you can measure the exact set up of your saw table and rip fence.



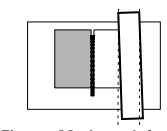


Fig 0a - Marks on left side

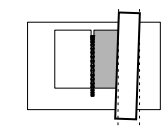


Fig 0b - Marks on right side

Tool marks or burning on ripped faces

Excess tool marks or burning on ripped faces means the fence is not parallel to the blade.

Marks are on the left side of the cut means the back of the fence is too far right [Fig 0a].

Marks are on the right side of the cut means the back of the fence is too far left [Fig 0b].

Instructions

Step 1 – Mark and drill holes

1.1 Draw a centerline down the 10" length of the Jig Base and mark it at 1" (25mm) and 9" (228mm) from the front edge. These will be the mounting holes M1 and M2. [Fig 1a].
NOTE: the center mounting hole is not used.

1.2 Make three more marks along this line at 2-1/16", 4- 5/16" and 8-5/16" (52mm, 110mm and 211mm) from the front. These will be the adjustment holes A1, A2, and A3 [Fig 1a].

1.3 Drill 1/2" (12mm) diameter counter bore holes, 5/16" (8mm) deep at M1 and M2 [Fig 1b].

1.4 Drill 1/4" (6mm) diameter holes through the center of the counter bores cut in the previous step [Fig 1b].

1.5 Drill 3/4" (19mm) diameter holes through the Jig Base at A1, A2, and A3 [Fig 1b].

1.6 Draw a center line along the 3" (76mm) length of the Clamp Plate and mark it 1/2" (13mm) in from each end [Fig 1c].

1.7 Drill 1/4" (6mm) through holes at these points. Ease the corners of the jig base and clamp plate if desired.

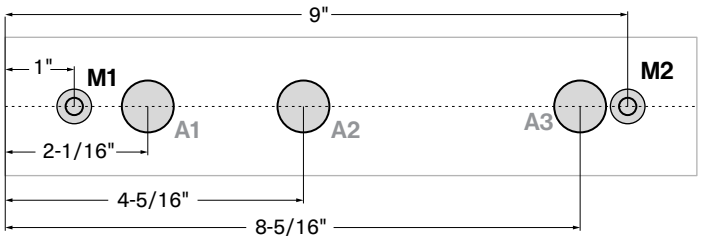


Fig 1a - Top view of Jig Base



Fig 1b - Section view of side of Jig Base

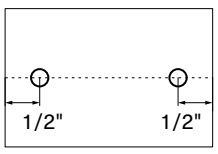


Fig 1c - Top view of Clamp Plate

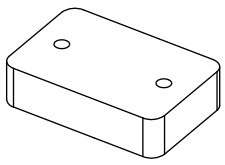


Fig 1d - Finished Clamp Plate

Step 2 – Cut Dovetail Tracks and dado on Jig Base

2.1 Mark the Jig Base 5-1/4" and 7-1/4" (70mm and 121mm) from the front edge. These are the Dovetail Track locations [Fig 2a].

2.2 Refer to the instructions included with the Dovetail Screws and cut Dovetail Tracks across the Jig Base centered on the lines [Fig 2c].

2.3 Mark the Jig Base 6-1/4" from the rear edge. Cut a dado at this line the same width as, and slightly shallower than, your caliper. [Fig 2c].

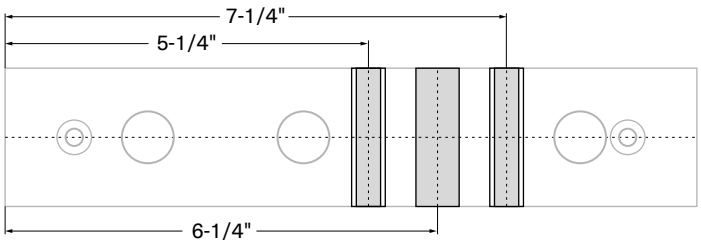


Fig 2a - Dovetail Track and dado locations

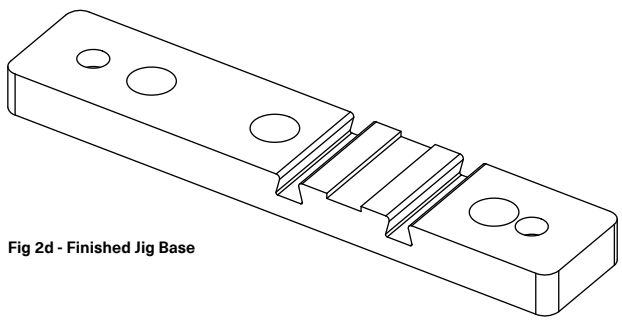


Fig 2d - Finished Jig Base

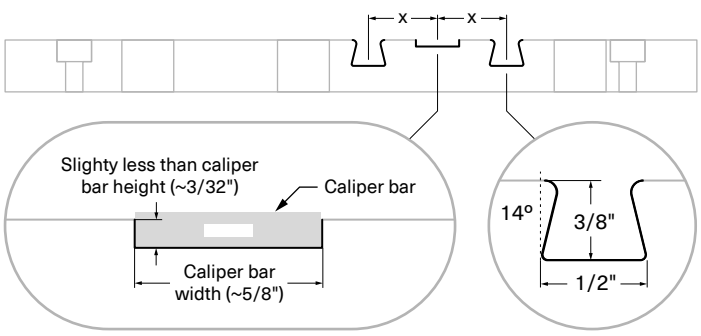


Fig 2c - Dado and Dovetail Track dimensions

Step 3 – Mount and square jig

Refer to Steps 3-4 of the Miter Bar user manual.
NOTE: This jig has only two mounting screws rather than three. The center mounting hole of the Miter Bar is not used.

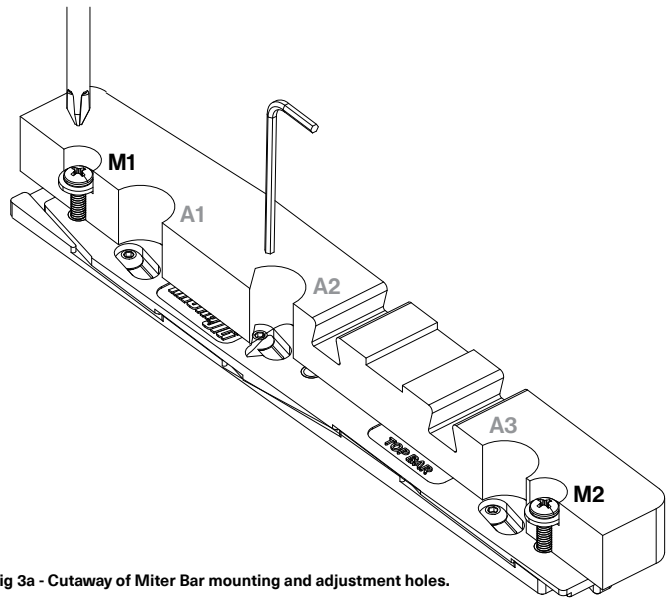


Fig 3a - Cutaway of Miter Bar mounting and adjustment holes.

Step 4 – Mount caliper

4.1 Slide a Dovetail Screw into each Dovetail Track in the Jig Base.

4.2 Set the caliper bar into the dado in the Jig Base. Position it with the depth rod towards the blade (it can be reversed as needed).

4.3 Slide the Clamp Plate over the screws so it rests on the caliper bar.

4.4 Use the knobs to loosely secure the caliper bar in place.

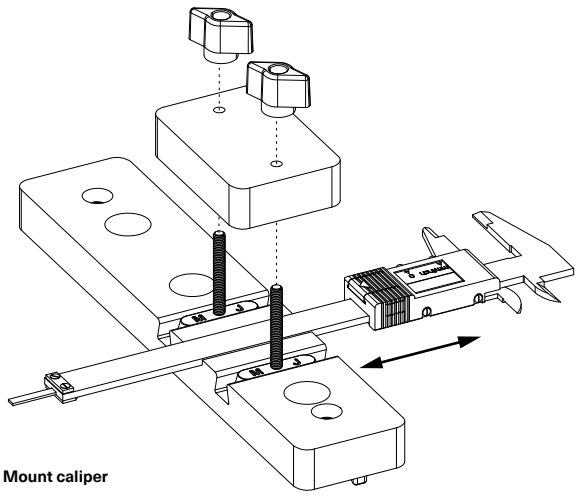


Fig 4a - Mount caliper

Step 5 – Adjust miter slot

5.1 Unplug the saw and raise the blade to full height. Mark the blade at the closest point to the front of the table [Fig 5a].

5.2 Adjust the caliper depth stop to touch the blade body (not the tooth) at this mark. Zero the caliper display [Fig 5b].

5.3 Rotate the blade until the mark is as far to the rear as possible. Slide the jig back along the miter slot and re-measure the distance to the mark. Both measurements should be the same [Fig 5c-5e].

5.4 If there is a difference front to back, adjust the miter slot so it is parallel to the blade. (refer to your saw's user manual).

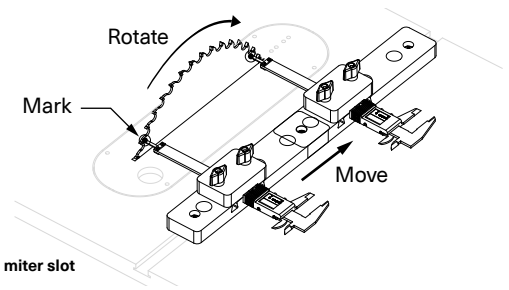


Fig 5a - Adjust miter slot

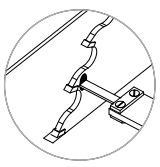


Fig 5b - Measure 1

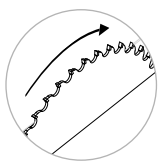


Fig 5c - Rotate blade

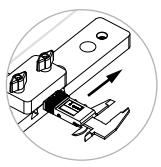


Fig 5d - Move jig

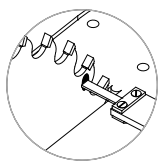


Fig 5e - Measure 2

Step 6 – Adjust rip fence

6.1 Flip the caliper so that the depth rod is toward the rip fence [Fig 6a].

6.2 Slide the jig as far foward as possible and measure the distance to the rip fence. Make sure the Miter Bar is fully engaged inside the miter slot. Zero the display on the caliper [Fig 6b].

6.3 Slide the jig as far backward as possible and measure the distance to the rip fence. Both measurements should be the same [Fig 6b].

6.4 If there is a difference front to back, adjust the rip fence so it is parallel to the miter slot. (refer to your saw's user manual).

NOTE: Not all rip fence faces are perfectly uniform from end to end. Check several points along the length of the rip fence to find any high spots. Measure at the highest spot both front and back.

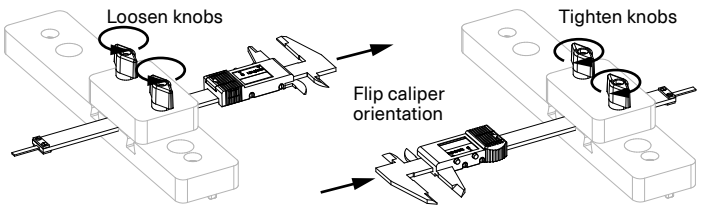


Fig 6a - Face caliper depth rod towards rip fence

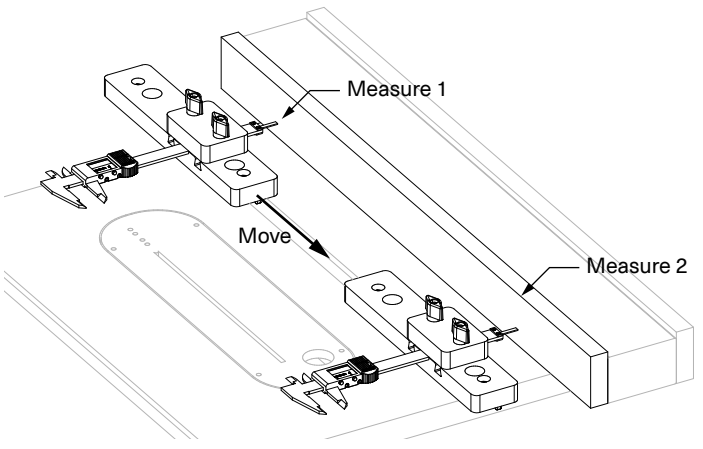
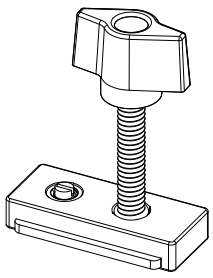


Fig 6b - Measure rip fence face

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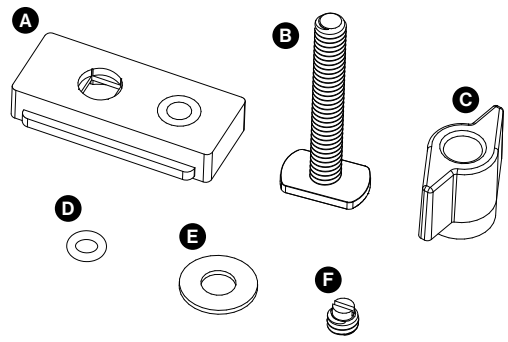
ZeroPlay® Miter Stop
User Manual (ZP750-S1)

Reliable anchors and stops for your miter slot.



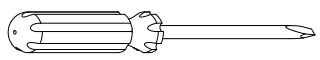
Parts List

#	Miter Stop Parts	Qty	Part #
A	Miter Stop	1	ZP750-P3
B	1/4"-20 x 1-3/4" T-bolt	1	GR-H12-EH
C	1/4"-20 yellow wing knob	1	ZP-H6
D	5/16" OD O-ring	1	ZP-H7
E	1/4" x 1/2" flat washer	1	ZP-H8-EH
F	Nylon 1/4"-20 x 1/4" set screw	1	ZP-H9



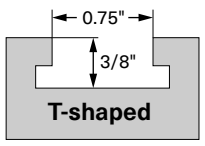
Wood types: void-free plywood (e.g. Baltic birch), standard MDF, or seasoned solid wood.

Required Tools (Not included)



Flathead screwdriver

Compatibility



Fits standard 3/4" **T-shaped** miter slots ONLY on table saws, router tables, band saws, or stationary sanders. Minimum miter slot depth of 5/16" (8mm) required.

Instructions

Use 1 - Using the Miter Stop with a Miter Bar to limit travel

The ZeroPlay® Miter Stop can be used to set limits for sleds on table saws and router tables. This helps prevent the blade from being exposed as the sled is used and prevent sleds from being cut too far into the base.

Miter Stops create anchors anywhere along your miter slot to set a limit on how far a sled can move front to back. When used together with a ZeroPlay® Miter Bar, the Miter Stop will make contact with the Miter Bar and not the sled.

1.1 Slide the Miter Stop into the miter slot with the tabs along the bottom edge fitted into the "T" section of the slot [Fig 1.1, Fig 1a].

1.2 Place your sled into the miter slot (behind the Miter Stop) and slide it along until it reaches the point you want it to stop. The ZeroPlay® Miter Bar will push the Miter Stop along with the sled [Fig 1b-1c].

1.3 Carefully remove the sled to expose the Miter Stop [Fig 1d].

1.4 Secure the Miter Stop in place by tightening the nylon set screw (F). The Miter Stop "flanges" should be pressed against the top of the "T" slots. The Miter Stop will now limit how far your sled can slide along the miter slot [Fig 1.4, Fig 1e].

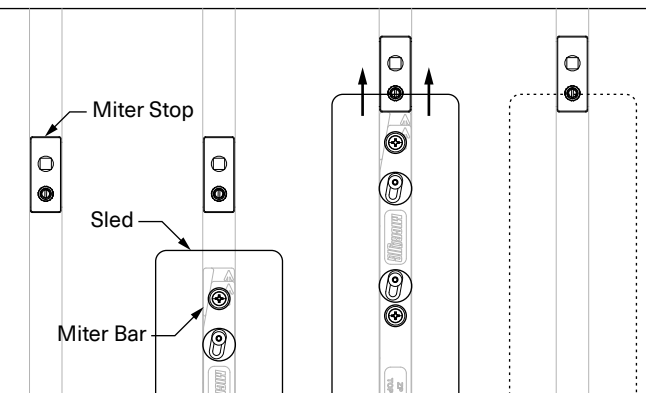


Fig 1a - Slide Miter Stop into miter slot behind Miter Stop

Fig 1b - Place sled into miter slot

Fig 1c - Push the sled to desired location

Fig 1d - Carefully remove sled

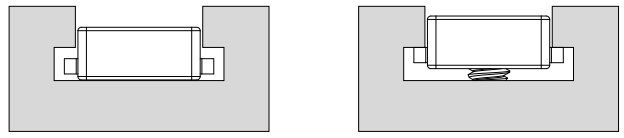


Fig 1.1 - Miter Stop in miter slot

Fig 1.4 - Miter Stop secured

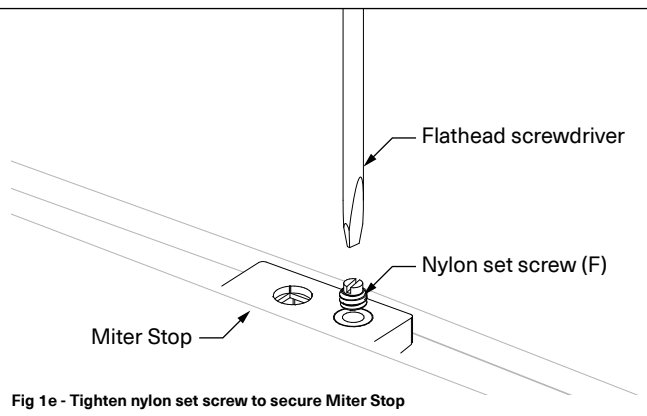


Fig 1e - Tighten nylon set screw to secure Miter Stop

Use 2 - Using the Miter Stop as a clamp

The ZEROPLAY Stop can also be used as a clamp to securely hold shop-built jigs and fixtures on the table top using the miter slot as an anchor point. This is done using the provided T-Bolt (H) or any standard 1/4"-20 carriage bolt of your choice.

A stop block above the table allows for stopped cuts when you are not using the ZeroPlay® Miter Bar. The Miter Stop can be used to firmly clamp feather boards, thin rip jigs, cove cutting rails, and other shop-made accessories into the miter slot.

TIP: The Set Screw (L) can be loosened and left in place when the Miter Stop is being used as a clamp. There is no need to completely remove it.

One ZeroPlay® Miter Stop can be used to make stopped cuts on table saws and band saws, and two can be used on router tables to mill accurate grooves on the router table as shown in Fig. XX

2.1 Insert the included T-bolt (B) through the bottom of the square hole in the Miter Stop. The bottom is recessed to accept the bolt head.

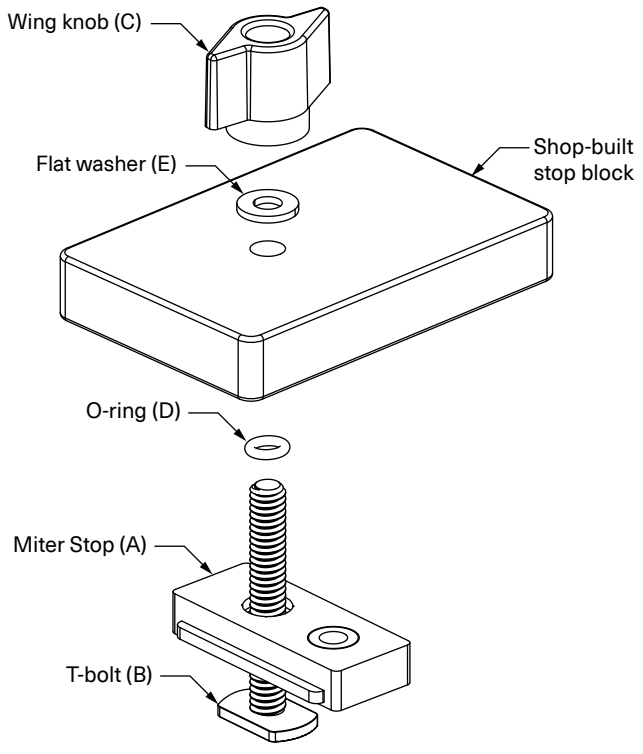
2.2 Slide the O-Ring (D) down the threaded shaft of the T-bolt (B) until it rests on the Miter Stop. This keeps the T-bolt (H) from falling out.

2.3 Place your shop-built stop block (or any jig of your choice) over the T-bolt (B).

2.4 Add the flat washer (E) and then the wing knob (C) onto the T-bolt (B) over the block.

2.5 Slide the Miter Stop into the miter slot [Fig 1.1] with the block or jig above the table surface.

2.6 Position the assembly where needed and clamp it in place by tightening the wing nut. The block will engage with the top of the table and pull the ZeroPlay® Miter Stop against the top of the "T" grooves of the miter slot to lock everything in place.



Miter Bar Drill Guide

For use with the ZeroPlay™ Miter Bar System

Use center punch, nail, or pin to mark centers of all 6 holes (M1, M2, M3, A1, A2, and A3).

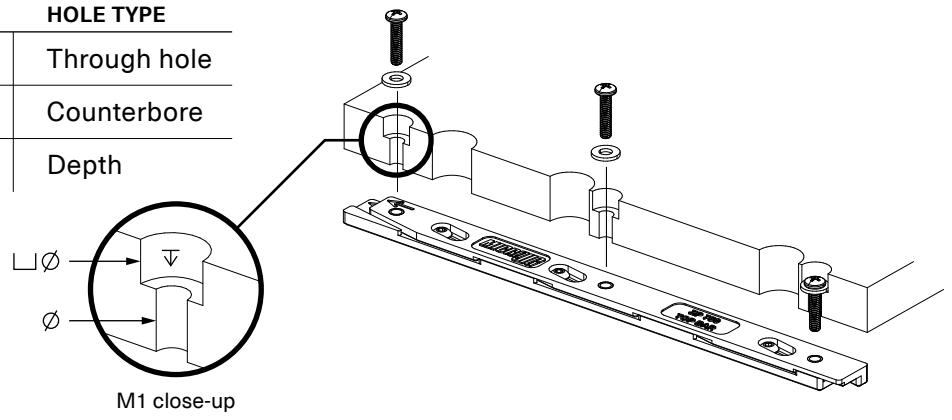
–OR–

Copy drawing at 1:1 scale to use as a template.

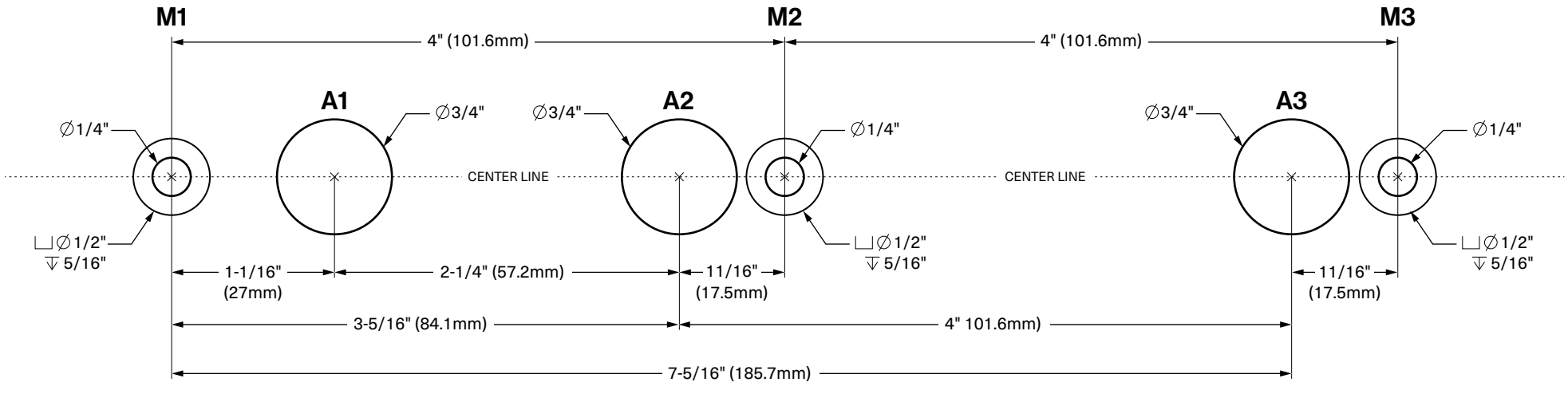
Download printable file at: **microjig.com/zp-drill-guide**

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SYMBOL	HOLE TYPE
∅	Through hole
⌴∅	Counterbore
↧	Depth



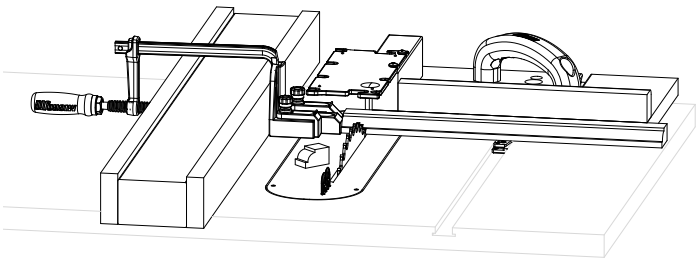
M1 close-up



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ZeroPlay® Miter Bar
Cutoff Sled Plans

For making repeatable 90º cuts on table saws.



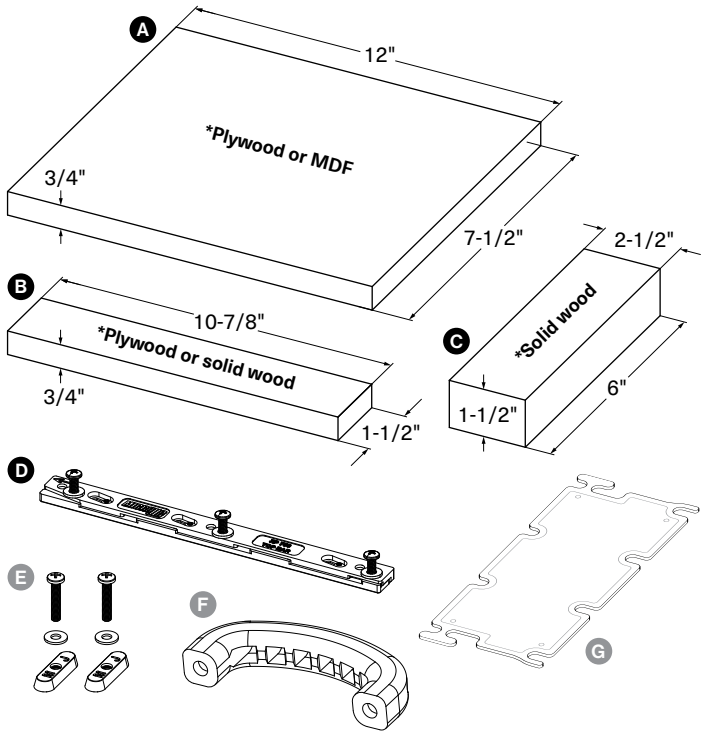
⚠ WARNING

Always wear safety glasses and hearing protection. Follow all safety precautions and use best practices. Microjig assumes no liability for any products not sold and manufactured by Microjig.

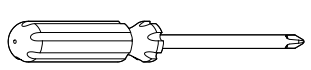
Parts List

#	Saw Setup Jig Parts
A	Sled Base: 12" x 7-1/2" x 3/4" (305mm x 190mm x 19mm)
B	Off-Cut Pusher: 6" x 2-1/2" x 1-1/2" (152mm x 64mm x 38mm)
C	Fence: 10-7/8" x 1-1/2" x 3/4" (276mm x 38mm x 19mm)
D	ZeroPlay® Guide Bar
E	MatchFit™ Dovetail Nuts with hardware (Optional)
F	Grr-ripper® Handle (Optional)
G	Deflector/Connector (Optional)

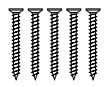
***Recommended wood types**: void-free plywood (e.g. Baltic birch), standard MDF, or seasoned solid wood.



Required Tools & Materials (Not included)



Phillips screwdriver



(x5) 1.5" wood screws

Instructions

The Cutoff Sled built with the ZeroPlay™ Miter Bar provides perfect 90º cuts every time. It features an angled "off-cut pusher" that automatically moves the cutoff part away from the saw blade to prevent kick back.

The Grr-ripper® Handle provides comfort and increased control when using the sled and mounts to the sled base using MatchFit™ Dovetail Nuts. The Deflector/Connector deflects dust and chips flying off the blade. All products are sold separately.

TIP: Before beginning the sled build, make sure your table saw is in good operating condition and properly tuned up.

Step 1 - Square sled and draw center line

1.1 Set your rip fence to be 1/8" (3mm) to the right of your saw blade [Fig 1a].

1.2 Set your sled base square (90º) to the rip fence [Fig 1b].

1.3 Mark the center of the miter slot on the front and back edges of your sled base [Fig 1c].

1.4 Draw a straight line connecting these two marks [Fig 1d].

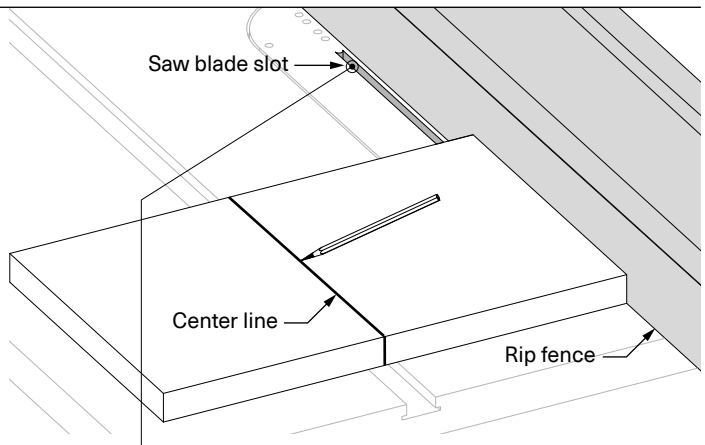


Fig 1a - Set rip fence 1/8" from blade

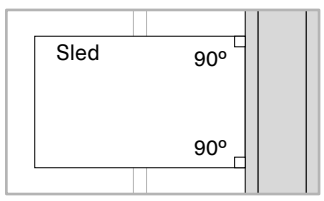


Fig 1b - Square sled 90º to rip fence

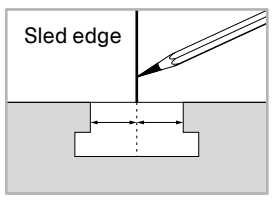


Fig 1c - Mark front & back edges

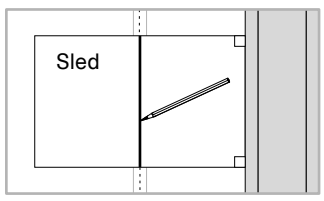


Fig 1d - Connect front & back edge marks

Step 2 - Drill Miter Bar mounting and adjustment holes

2.1 Mark two mounting holes along the center line at 1" (25mm) and 5" (126mm) from the back of the sled base. These are M1 and M2.

2.2 Mark the two adjustment hole locations 1-11/16" (43mm) and 5-11/16" (144mm) along the same line. These are A1 and A2.

2.3 Drill a 3/4" (19mm) diameter through hole at each of the adjustment hole locations, A1 and A2 [Fig 2a].

2.4 Drill a 1/2" (12mm) diameter counter bore 5/16" (8mm) deep at the mounting hole locations, M1 and M2 .

2.5 Drill 1/4" (6mm) through holes in the center of the counter bores, M1 and M2 [Fig 2a].

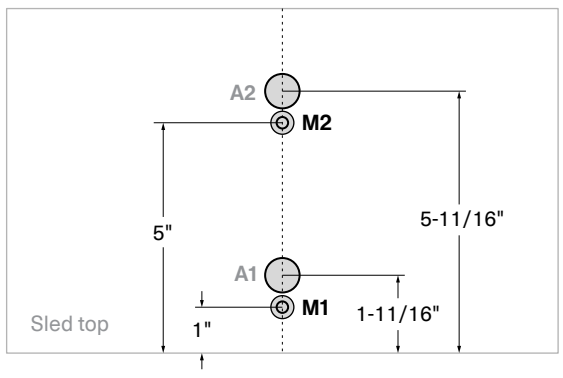


Fig 2a - Miter bar mouting and and adjustment holes

Step 3 - Drill fence and off-cut pusher mounting holes

3.1 With the bottom of the sled base facing up, mark and drill three pilot holes 3/8" along the front edge of the sled as shown in [Fig 3a]. This is where the fence will be secured.

3.2 Drill two more pilot holes 3/4" (20mm) along the right edge of the base. This is where the cutoff block will be secured.

3.3 Countersink all pilot holes.

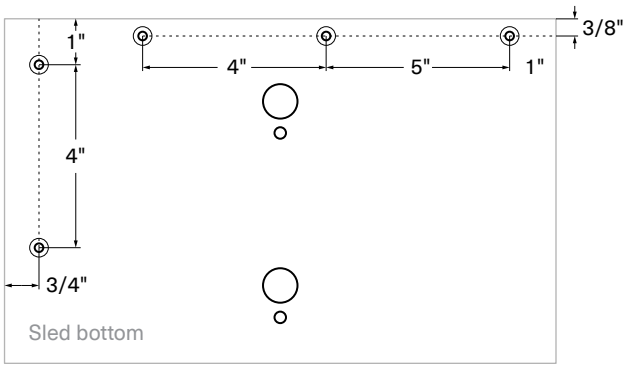


Fig 3a - Fence and off-cut pusher mounting holes

Step 4 - Route Dovetail Tracks

4.1 Mark parallel lines 2" (50mm) on each side of the Miter slot center line drawn in Step 1.

4.2 Route two MatchFit™ Dovetail Tracks into the top face of your sled where these new lines are located. Follow the instructions that come with the Dovetail Nuts. These Dovetail Tracks are for mounting the Grr-ripper™ handle.

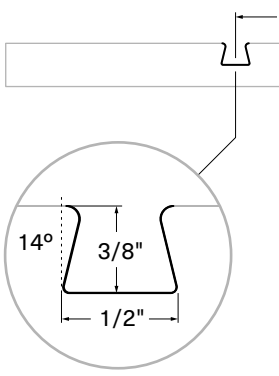


Fig 4a - Dovetail track profile

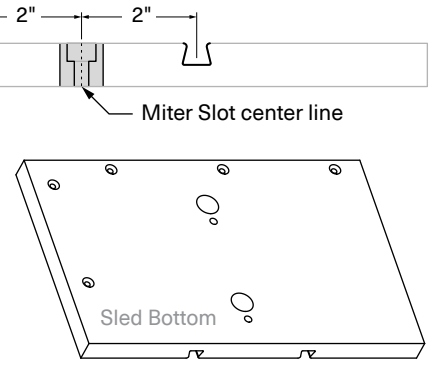


Fig 4b - Finished sled base

Step 5 - Make the off-cut pusher

5.1 To form the "off-cut pusher" block, you need to first cut a rabbet into the bottom. Set your blade to match the plywood base thickness, and the rip fence to 1" (25mm) and rip a groove into the bottom of the block [Fig 5a].

5.2 Raise the blade to 1-1/8" (28.5mm) and reset the rip fence to 1-5/8" (41mm). The waste will be on the off side of the blade. This should leave a 3/8" (9mm) thick leg beside the rabbet [Fig 5b].

5.3 Screw the block to the edge of your sled base using the wood screws. Make sure front edges are aligned [Fig 5e].

5.4 Set your miter gauge to 30 degrees and cut 1/4" (6mm) off of the front corner of the block to form the bevel angle. This is the easy and safe method for making this cut [Fig 5d].

5.5 The fence can now be attached using the wood screws. Be sure to set it flush along the front edge of the base [Fig 5e].

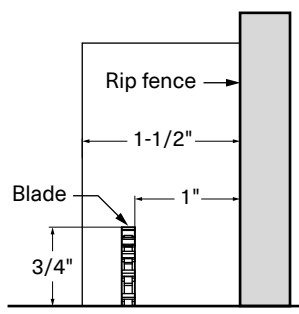


Fig 5a - Off-cut pusher cut #1

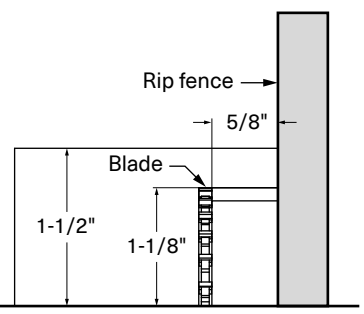


Fig 5b - Off-cut pusher cut #2

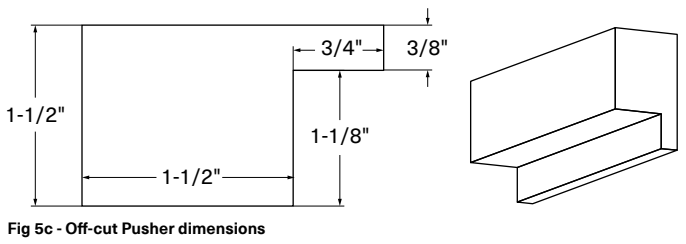


Fig 5c - Off-cut Pusher dimensions

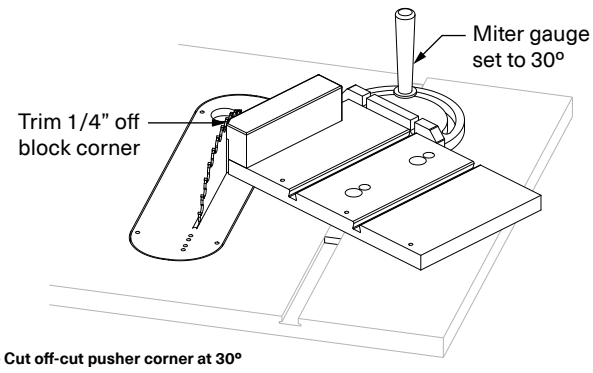


Fig 5d - Cut off-cut pusher corner at 30º

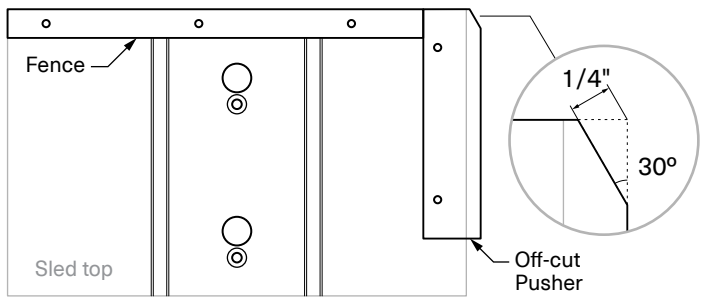
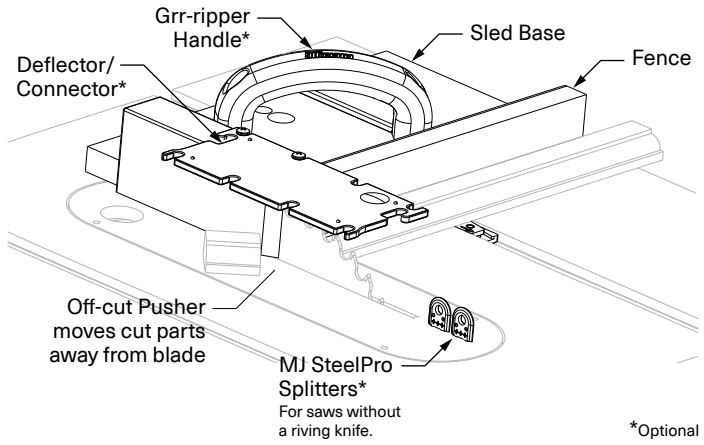


Fig 5e - Finished sled top view

Step 6 - Mount Miter Bar

6.1 Assemble and mount the ZeroPlay® Miter Bar to the sled. Make sure to lower the blade completely and set your saw's rip fence to 1/4" (6mm). Refer to Steps 3-4 of the Miter Bar user manual.

NOTE: Your first cut will cut a groove in the sled where the base meets the Off-cut Pusher. This is by design to provide a backer to the crosscut. The front of the Off-Cut Pusher will automatically move cut parts away from the blade to prevent damage and possible kick back.



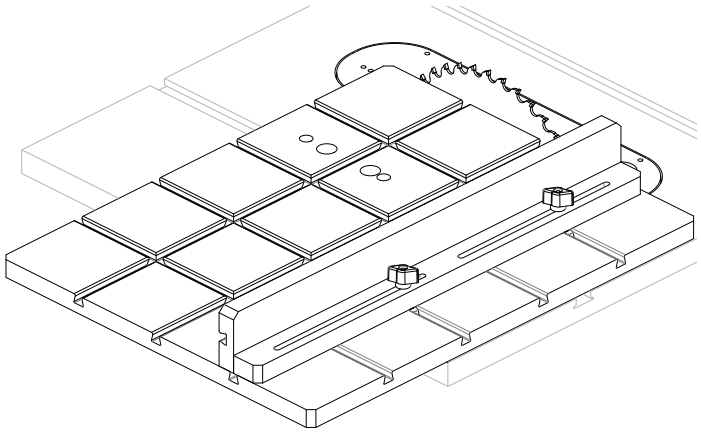
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ZeroPlay® 360 Sled Kit

User Manual (DV-360ZP750B1)

For creating precision shop-built sleds and jigs.
Watch the full instructional video at: **microjig.com/360sledvideo**



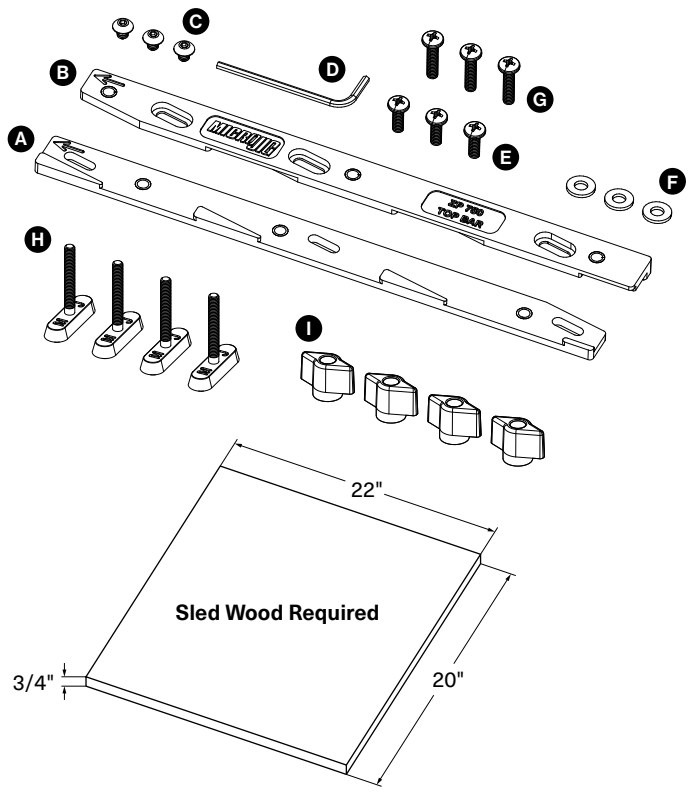
⚠ WARNING

Always wear safety glasses and hearing protection. Follow all safety precautions and use best practices. Microjig assumes no liability for any products not sold and manufactured by Microjig.

Parts List

#	360 Sled Kit Parts	Qty	Part #
A	Bottom Bar (with wedges)	1	ZP750-P1
B	Top Bar (with logo)	1	ZP750-P2
C	#8-32 x 3/16" button head screw	3	ZP-H1-EH
D	3/32" hex key	1	ZP-H2-EH
E	#8-32 x 1/2" pan head screw	3	ZP-H3-EH
F	#10 flat washer	3	ZP-H4-EH
G	#8-32 x 3/4" pan head screw	3	ZP750-H19-EH
H	1.5" MatchFit™ Track Screw (#10-32)	4	DV-HL5
I	#10-32 Wing Knobs	4	GR-H52

#	**Required Tools** (Not included)	Qty
1	MatchFit™ **OR** standard 1/2" x 14º dovetail router bit	1
2	Adjustable square	1
3	3/4" forstner bit (18mm)	1
4	1/2" forstner bit (12mm)	1
5	1/4" standard drill bit (6mm)	1
6	5/16" standard drill bit (8mm)	1
7	Philips-head screwdriver	1
8	5-cent coins **OR** washers	2
9	3/4" thick scrap wood (18mm)	1
10	Pencil **OR** pen	1



Sled wood: 22" x 20", 3/4" thick (550mm x 500mm, 18mm thick)

Wood types: void-free plywood (e.g. Baltic birch), standard MDF, or seasoned solid wood.

Instructions

The ZeroPlay® 360 Sled uses the MatchFit™ Dovetail Track system which allows you to position its fence at any angle while keeping the sled parallel to the blade.

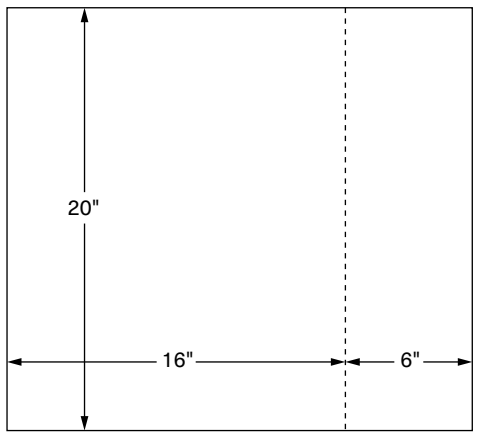
The Dovetail Tracks can also be used to add custom stops and hold downs and secure parts using MatchFit™ Dovetail Clamps. This allows for safe, repeatable cuts while keeping your hands away from the blade.

Make sure that your table saw is properly tuned and maintained before using the ZeroPlay™ System. It is important that the rip fence is exactly parallel with the blade. Perform all steps as accurately as possible.

Step 1 – Create the base of the 360 Sled

1.1 Cut your selected piece of wood to 22" x 20" (550mm x 500mm)) using a table saw as needed.

1.2 Cut the piece down to 16" x 20" (406mm x 500mm) in a single cut. The 6" (152mm) off-cut piece will be used for the fence in **Step 7**.



NOTE: Make sure all dimensions are accurate and corners are 90º.

Step 2 – Measure and mark Dovetail Tracks

TIP: Different saws have different miter slot locations. Laying out the ZeroPlay® mounting holes and Dovetail Track locations before drilling or cutting is recommended.

2.1 Set the rip fence so that it just covers the blade slot [Fig 2a].

2.2 Set your sled base square (90º) to the rip fence [Fig 2b].

2.3 Mark the center of the miter slot on the front and back edges of your sled base [Fig 2c].

2.4 Draw a straight line connecting these two marks [Fig 2d].

2.5 Measure the sled base side to side in 4" (101.6mm) increments to lay out the vertical Dovetail Tracks [Fig 2e]. Shift all track lines left or right if a track line is closer than 1-1/2" to the center line marked in the previous step. Move all lines together keeping them 4" apart.

2.6 Measure the sled base front to back in 4" increments to lay out the horizontal Dovetail Tracks [Fig 2f]. The ZeroPlay® mounting holes are dimensioned out to work with this spacing.

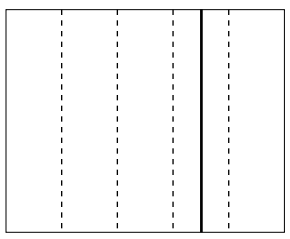


Fig 2e - Vertical Dovetail Tracks

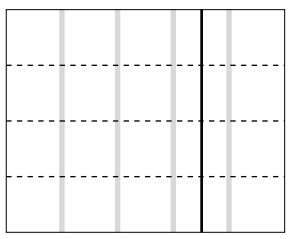


Fig 2f - Horizontal Dovetail Tracks

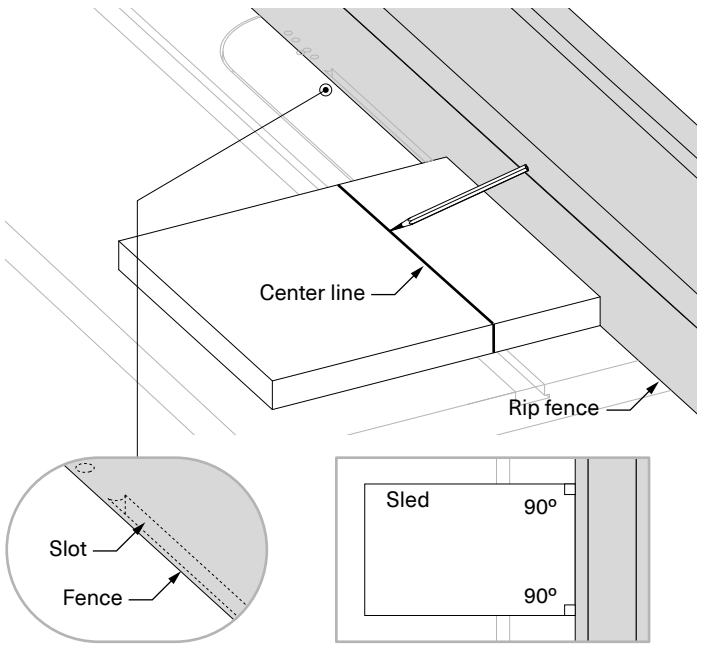


Fig 2a - Set rip fence to cover slot

Fig 2b - Square sled 90º to rip fence

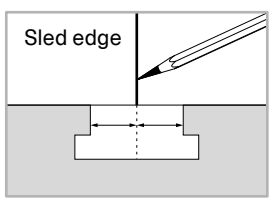


Fig 2c - Mark front & back edges

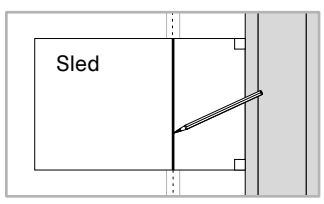


Fig 2d - Connect front & back edge marks

Step 3 – Cut relief grooves

Dovetail Tracks are 4" apart on center. All measurements are taken from the center of the bit.

3.1 On your router table, set a 1/4" straight bit to a cutting depth of 11/32" (9.5mm).

3.2 Set the router table fence to 4" and cut the four outside grooves by running each side along the fence. Rotate the workpiece 90º after each cut. (Fig 3.2)

3.3 After all four cuts are made, set fence to 8", and repeat previous step. Only a single cut is needed along the 20" side. (Fig. 3.3)

NOTE: An auxiliary fence is required if your router table fence can't be positioned 4" to 8" away. View plans at: **microjig.com/routertablefence**

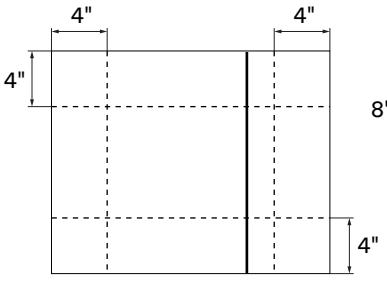


Fig 3a - Vertical Dovetail Tracks

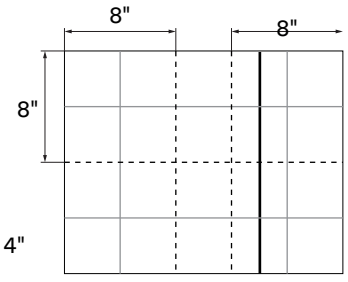
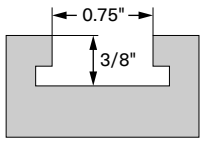
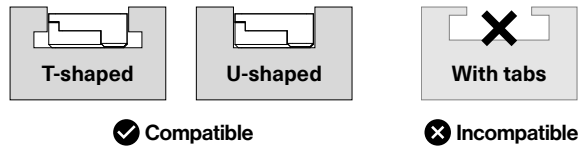


Fig 3b - Horizontal Dovetail Tracks

Compatibility



Fits most standard 3/4" miter slots on table saws, router tables, band saws, or stationary sanders. Minimum miter slot depth of 5/16" (7.94mm) required.



Step 4 – Route Dovetail Tracks

4.1 Set a 1/2"–14º dovetail router bit to a cutting depth of 3/8" (9.5mm).

4.2 Test route a piece of scrap wood, and use the Dovetail Hardware to ensure that the dovetail bit profile and cutting depth are correct.

4.3 Confirm that the Dovetail Hardware remains inside the Dovetail Tracks and below the material surface when pulled up.

4.4 Proceed to route Dovetail Tracks in all relief grooves.

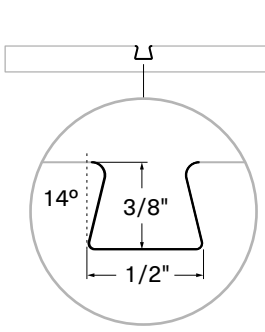


Fig 4a - Dovetail Track profile

Fig 4b - Center line spacing

Step 5 – Drill Miter Bar holes

5.1 Measure along the center line drawn in Step 2 and mark it at 1-3/4" (44mm) back from the front edge of the sled. Label it M1. This is the location of the first mounting hole.

5.2 Mark two more mounting holes at 5-3/4" (146mm) and 9-3/4" (248mm) and label them M2 and M3, respectively.

5.3 Mark three adjustment hole locations at 2-13/16" (71mm), 5-1/16" (129mm), and 9-1/16" (230mm). Label them as A1, A2, and A3.

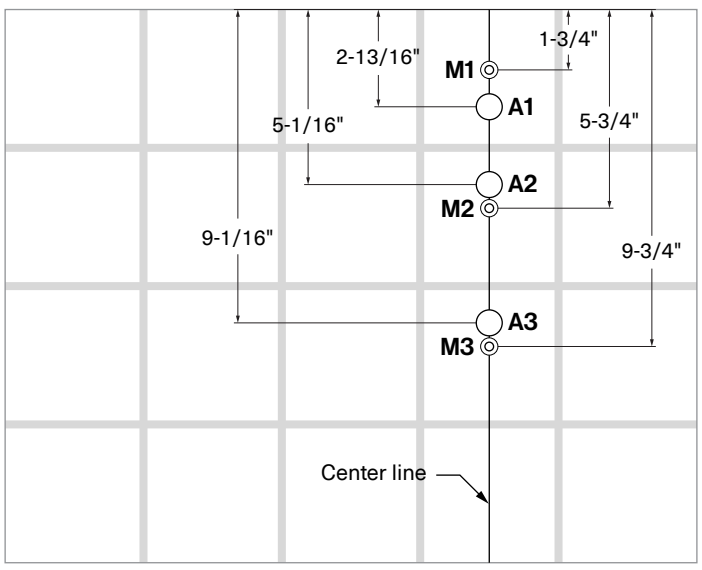


Fig 5a - Mounting and adjustment hole locations

Step 5 – Drill Miter Bar holes (Continued)

5.4 Drill 1/2" (12mm) diameter counterbores 5/16" (8mm) deep at M1, M2, and M3 using a 1/2" (12mm) forstner bit. Then drill 1/4" (6mm) through holes at each mounting hole (M1, M2, M3) through the center of the counter bore [Fig. 2c].

5.5 Drill 3/4" (19mm) through holes at A1, A2 and A3.

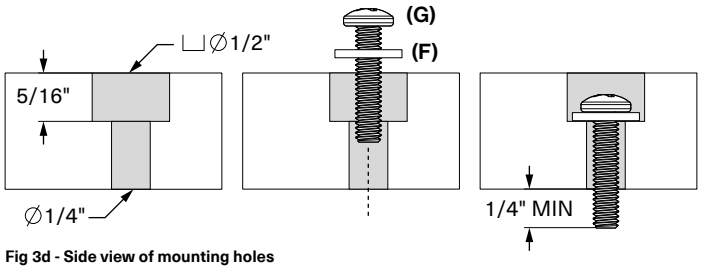


Fig 3d - Side view of mounting holes

Step 6 – Assemble and mount Miter Bar

Make sure that your table saw is properly tuned and maintained before using the ZeroPlay™ System. It is important that the rip fence is exactly parallel with the blade. Perform all steps as accurately as possible.

Miter Bar adjusts from 0.72" to 0.78" (18.3mm–19.8mm) wide. Push the bottom bar away from the top bar to decrease width [Fig 6a]. Push the bars together to widen [Fig 6b].

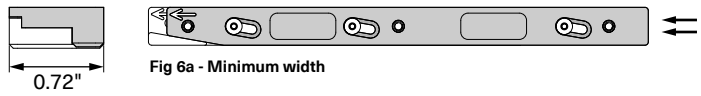


Fig 6a - Minimum width

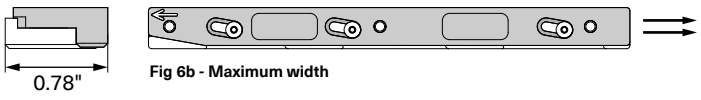


Fig 6b - Maximum width

6.1 Stack the Top Bar (B) on top of the Bottom Bar (A) with the arrows upwards and in the same direction. Insert (3x) button head screws (C) through the counterbored slots in the Top Bar and lightly secure both bars together using the hex key (D).

6.2 Adjust the bars to the narrowest setting [Fig 6a] and lightly tighten the screws.

6.3 Using a philips screwdriver, attach the Miter Bar to the bottom of the sled using (3x) 3/4" pan head screws (G) and (3x) flat washers (F). Insert the screws with with washers through each mounting hole (M1, M2, M3) and tighten [Fig 6c].

6.4 Each adjustment slot should be visible through the adjustment holes (A1, A2, A3) drilled in Step 4.5.

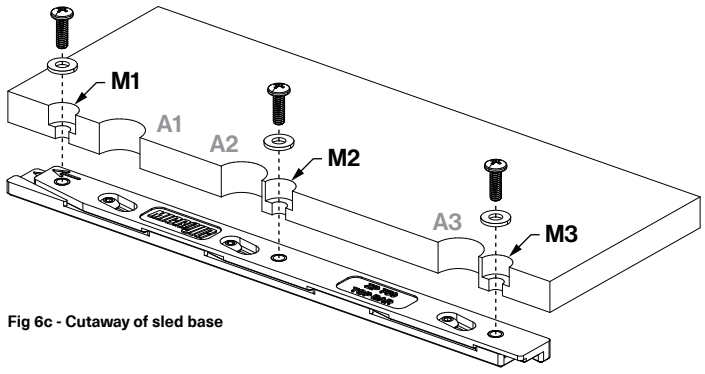


Fig 6c - Cutaway of sled base

6.5 Place the sled base on top of your table saw surface so the Miter Bar is set into one of the miter slots. Push the sled to the right so the Miter Bar is firmly against the inner wall of the miter slot [Fig 6d].

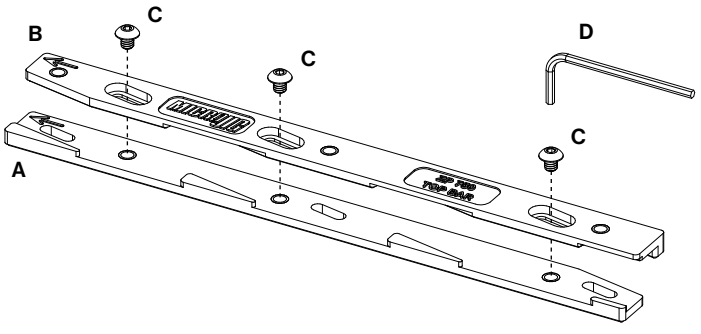
6.6 Using the hex key (D), loosen the three button head screws in the Miter Bar through the adjustment holes [Fig 6e].

6.7 Use the hex key to gently slide one of the button head screws downwards so the Miter Bar expands to completely fill the miter slot. Then, tighten each button head screw [Fig 6f.]

6.8 Test the Miter Bar fit by sliding the sled along the miter slot. It should slide freely with no side-to-side play. Repeat the previous steps if the fit is too tight or too loose.

6.9 When the fit is correct, loosen the mounting screws (M) and gently slide the rip fence to the right edge of the sled base until they meet. Lock the rip fence and secure the Mounting Screws.

Your 360 Sled base is ready for the fence.



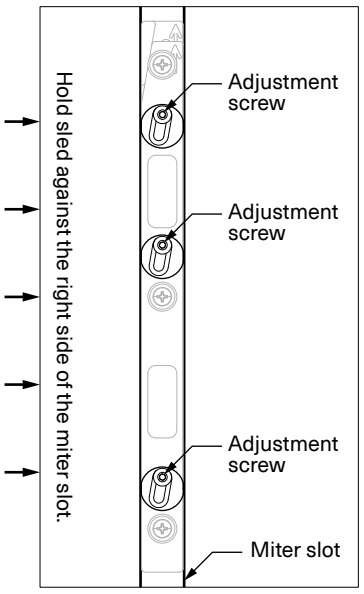


Fig 6d - Top view of assembled sled

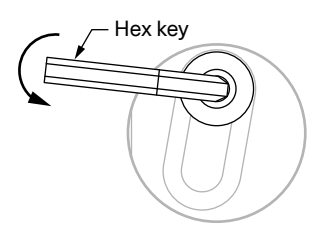


Fig 6e - Loosen button head screws

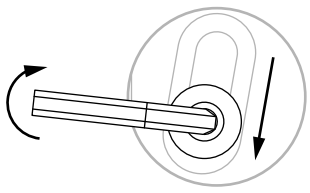


Fig 6f - Slide to calibrate fit, then tighten

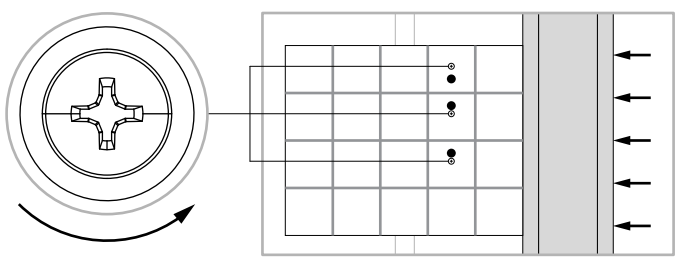


Fig 6e - Loosen mounting screws

Fig 6f - Push rip fence towards sled and tighten screws

Step 7 – Build 360 Fence

6.1 Using the off-cut piece left over from Step 1, cut a 2-1/2" (64mm) strip (Strip A), and a 1-1/4" (32mm) strip (Strip B) using your table saw [Fig 7a].

6.2 On (Strip B), mark lines at 1-1/2" (38mm) and 9" (228mm) in from each end, and a line down the length of the strip 1/2" (12mm) in from an edge. Drill 5/16" (8mm) diameter thru holes where these lines intersect. These holes will be the beginning and end points of the dovetail hardware slots [Fig 7b].

6.3 On your router table, set the 1/4" (6mm) straight bit to a cutting depth of 1/4" (6mm), and set the fence to 1/2" (12mm).

6.4 Route between the 5/16" (8mm) pre-drilled endpoints, and raise the cutting depth to 11/32" (9mm) to make a second pass.

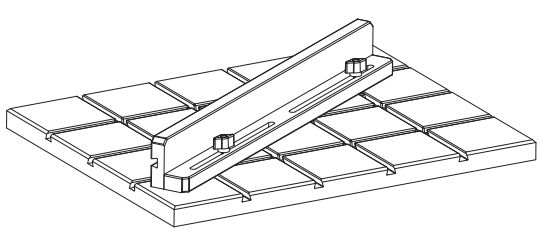
6.5 Flip the workpiece end-over-end, and repeat until both 7.5" slots are routed all the way through (Strip B) [Fig 7c].

6.6 Glue and clamp the edge of the (Strip B) (closest to the slots) to the top face of the (Strip A) to form a 90º L-shape [Fig 7d].

6.7 On your router table, set the fence to 1-1/4" (32mm). Route a relief groove with the 1/4" (6mm) straight bit set to a cutting depth of 11/32" (9mm).

6.8 Set the dovetail bit to a cutting depth of 3/8" (9.5mm), and route a dovetail track down the center of (Strip A) [Fig 7d].

6.9 Sand and chamfer to soften edges if desired. Attach the fence to the 360 Sled by putting the Dovetail Track Screws through the slots [Fig 7e]. Enjoy the most versatile sled in your shop!



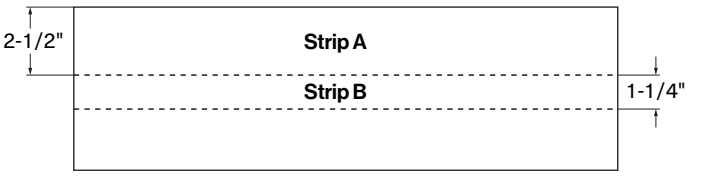


Fig 7a - Offcut wood piece for fence

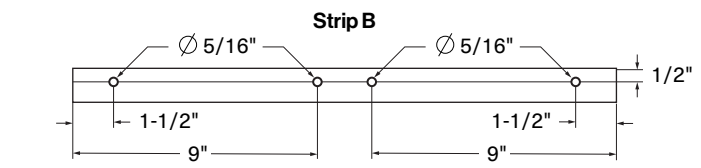


Fig 7b - Fence Strip B hole dimensions

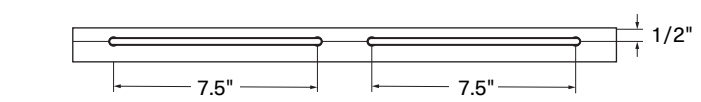


Fig 7c - Fence Strip B slot dimensions

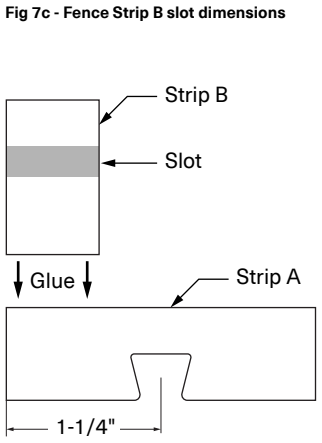


Fig 7d - 360 Fence side view

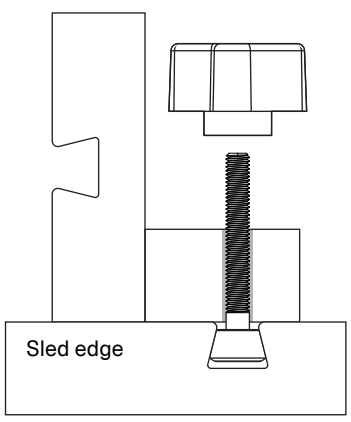
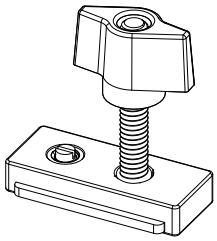


Fig 7e - Install 360 Fence on sled

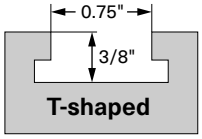
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support@microjig.com
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ZeroPlay® Miter Stop
User Manual (ZP750-S1)

Reliable anchors and stops for your miter slot.



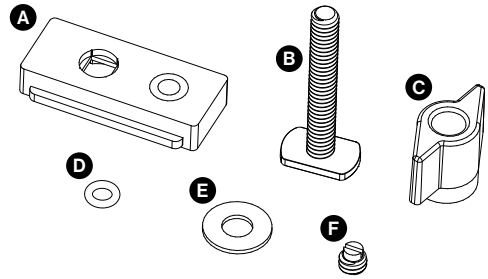
Compatibility



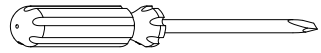
Fits standard 3/4" **T-shaped** miter slots ONLY. Minimum miter slot depth of 5/16" (8mm) required.

Parts List

#	Miter Stop Parts	Qty	Part #
A	Miter Stop	1	ZP750-P3
B	1/4"-20 x 1-3/4" T-bolt	1	GR-H12-EH
C	1/4"-20 yellow wing knob	1	ZP-H6
D	5/16" OD O-ring	1	ZP-H7
E	1/4" x 1/2" flat washer	1	ZP-H8-EH
F	Nylon 1/4"-20 x 1/4" set screw	1	ZP-H9



Required Tools (Not included)



Flathead screwdriver

Instructions

Using the Miter Stop to limit Miter Bar travel

The ZeroPlay® Miter Stop can be used to set limits for sleds on table saws and router tables. This helps prevent the blade from being exposed as the sled is used and protects sleds from being cut too far into the base.

Miter Stops create anchors anywhere along your miter slot to set a limit on how far a sled can move front to back.

NOTE: When used together with a ZeroPlay® Miter Bar, the Miter Stop will contact with the Miter Bar and not the sled.

1.1 Slide the Miter Stop into the miter slot with the tabs along the bottom edge fitted into the "T" section of the slot [Fig 1.1, Fig 1a].

1.2 Place your sled into the miter slot (behind the Miter Stop) and slide it along until it reaches the point you want it to stop. The ZeroPlay® Miter Bar will push the Miter Stop along with the sled [Fig 1b-1c].

1.3 Carefully remove the sled to expose the Miter Stop [Fig 1d].

1.4 Secure the Miter Stop in place by tightening the nylon set screw (F). The Miter Stop flanges should be pressed against the top of the T-slots. [Fig 1.4, Fig 1e].

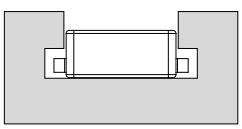


Fig 1.1 - Miter Stop in miter slot

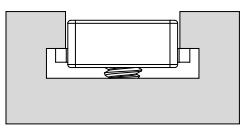


Fig 1.4 - Miter Stop secured

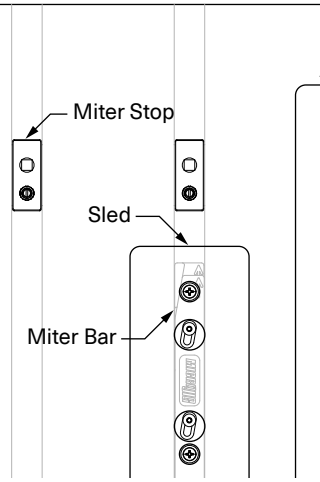


Fig 1a - Slide Miter Stop into miter slot

Fig 1b - Place sled into miter slot behind Miter Stop

Fig 1c - Push the sled to desired location

Fig 1d - Carefully remove sled

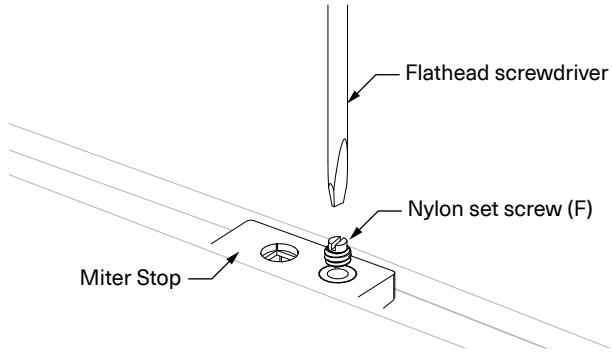


Fig 1e - Tighten nylon set screw to secure Miter Stop

Using the Miter Stop as a clamp

The ZEROPLAY Stop can also be used as a clamp to securely hold shop-built jigs and fixtures on the table top using the miter slot as an anchor point. This is done using the provided T-Bolt (H) or any standard 1/4"-20 carriage bolt of your choice.

A stop block above the table allows for stopped cuts when you are not using the ZeroPlay® Miter Bar. The Miter Stop can be used to firmly clamp feather boards, thin rip jigs, cove cutting rails, and other shop-made accessories into the miter slot.

2.1 Insert the included T-bolt (B) through the bottom of the square hole in the Miter Stop. The bottom is recessed to accept the bolt head.

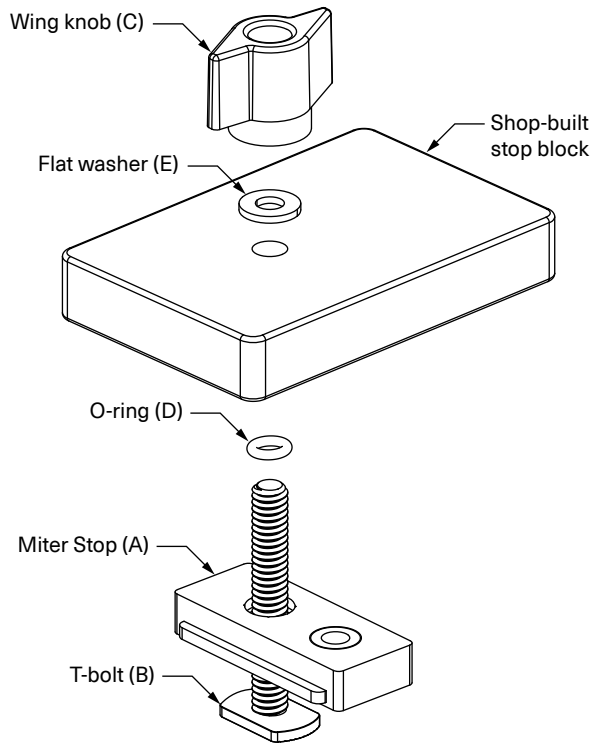
2.2 Slide the O-Ring (D) down the threaded shaft of the T-bolt (B) until it rests on the Miter Stop. This keeps the T-bolt (H) from falling out.

2.3 Place your shop-built stop block (or any jig of your choice) over the T-bolt (B).

2.4 Add the flat washer (E) and then the wing knob (C) onto the T-bolt (B) over the block.

2.5 Slide the Miter Stop into the miter slot [Fig 1.1] with the block or jig above the table surface.

2.6 Position the assembly where needed and clamp it in place by tightening the wing nut. The block will engage with the top of the table and pull the ZeroPlay® Miter Stop against the top of the "T" grooves of the miter slot to lock everything in place.



TIP: The Set Screw (L) can be loosened and left in place when the Miter Stop is being used as a clamp. There is no need to completely remove it.

One ZeroPlay® Miter Stop can be used to make stopped cuts on table saws and band saws, and two can be used on router tables to mill accurate grooves on the router table.