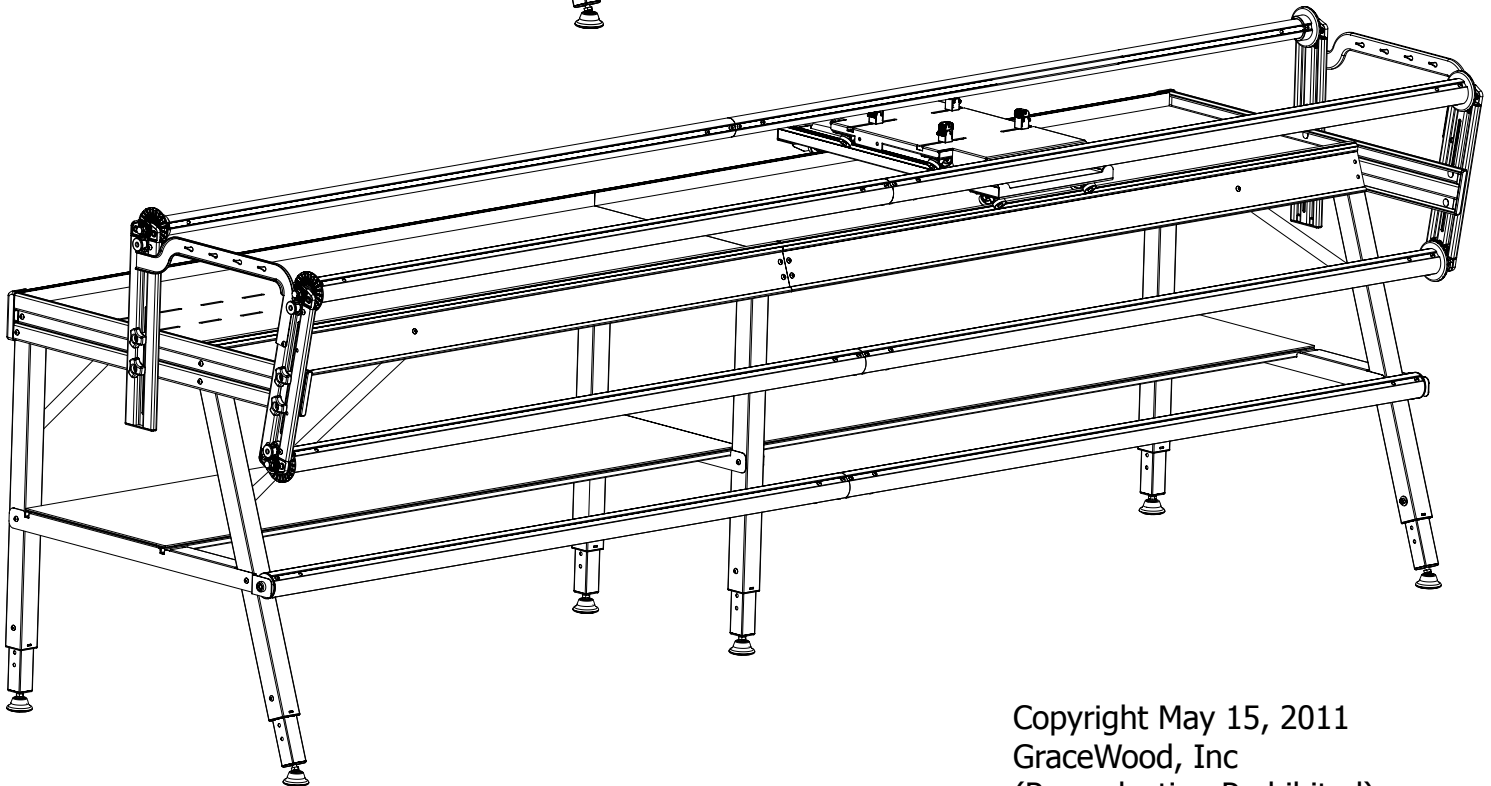
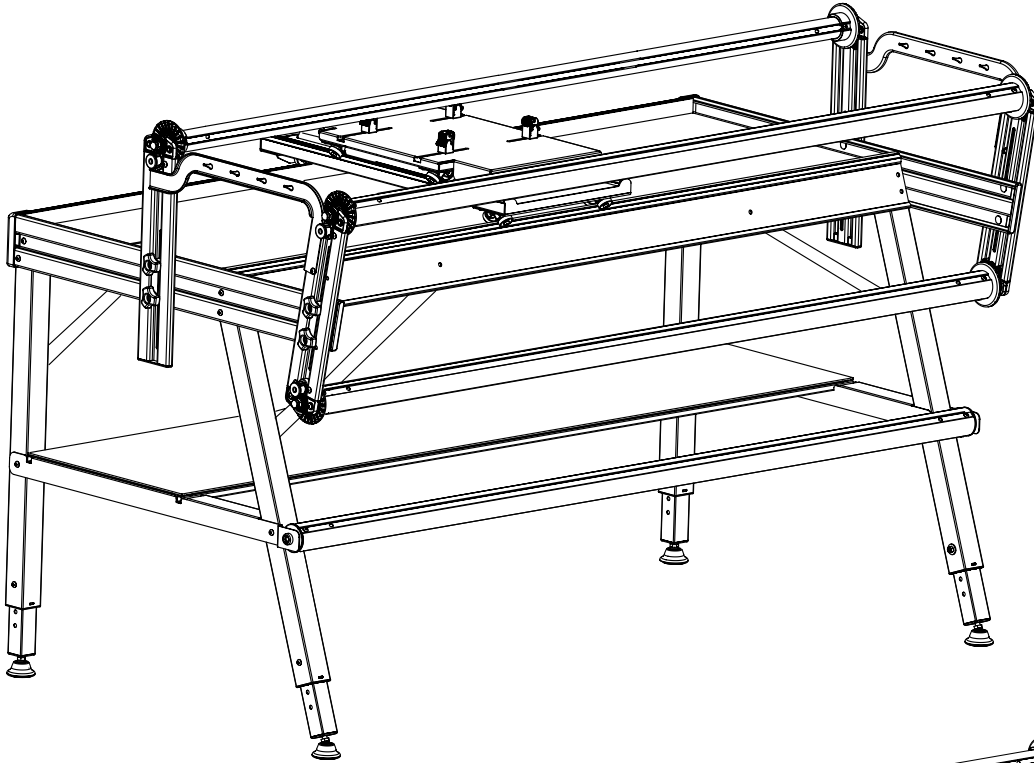




# Quilting Frame

With Dual-Wheel Carriage and Rigid-Rail Design



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Revision 3



# Quilting Frame

## Parts List

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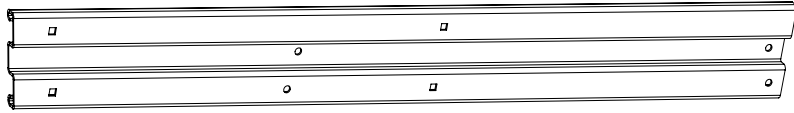
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## Welcome!

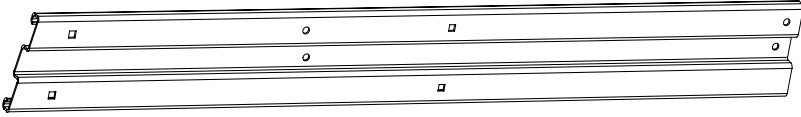
As you begin assembly of your new home machine quilting system, keep in mind the following:

- 1: The assembly process will be simple and step by step.
- 2: Read through each step completely before beginning that step.
- 3: Using the parts list as a reference, take the parts out of the box and make sure that you have them all.
- 4: Identify hardware packets: All hardware is separated by type and each packet is labeled for ease in identification.
- 5: If anything appears to be missing or damaged please contact your dealer or the Grace Company directly at 1-800-264-0644 or [info@graceframe.com](mailto:info@graceframe.com).

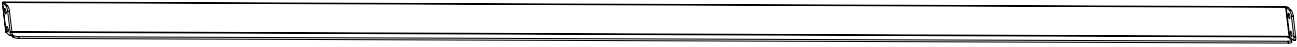
# Box 1



Left Frame End (1)



Right Frame End (1)



Shelf Support (4)



Front Top Track Support(2)



Front Track Support (2)



Back Track Support (2)



Rail (8)



Shelf (2)

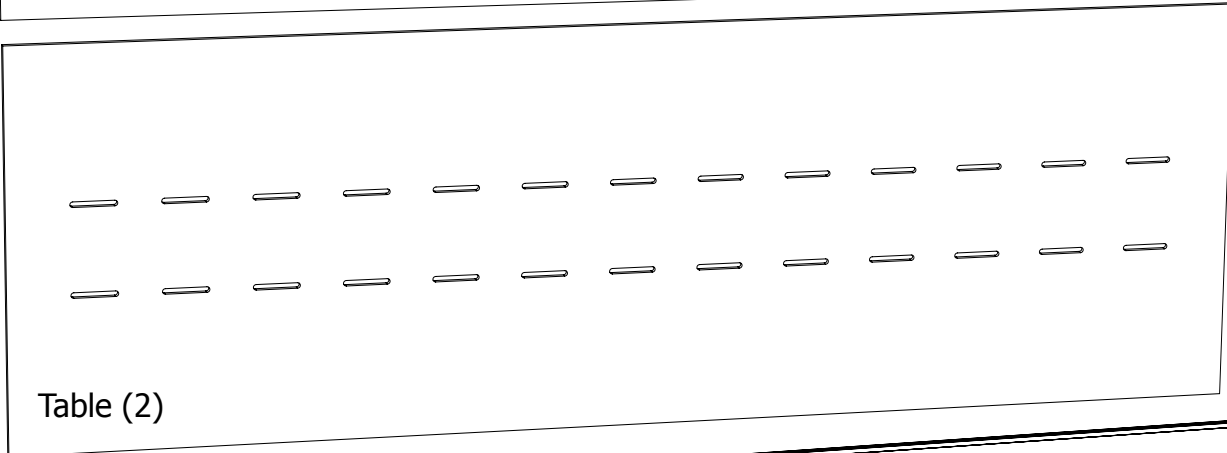
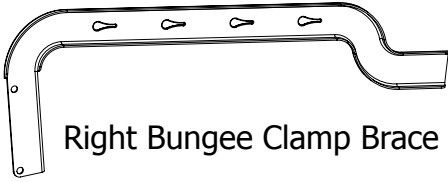


Table (2)

60" Plastic Track (4)

# Box 2



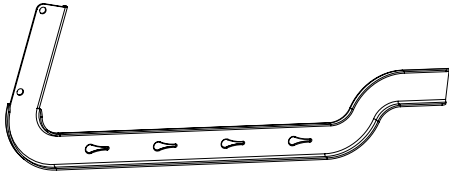
Right Bungee Clamp Brace (1)



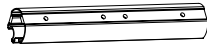
Back Track Support Coupler (1)



Table Support (6)



Left Bungee Clamp Brace (1)



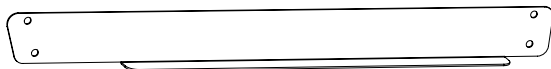
Rail Coupler (4)



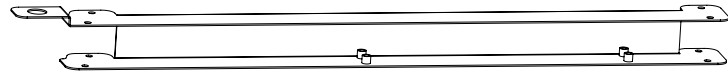
Front Track Support Coupler (1)



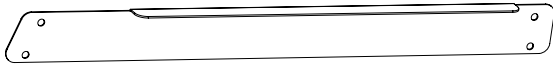
Shelf Support Connector (4)



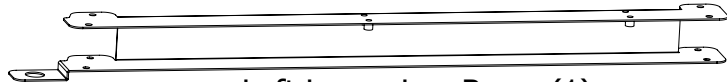
Left Track Brace (1)



Right Lower Leg Brace (1)



Right Track Brace (1)



Left Lower Leg Brace (1)



Middle Lower Leg Brace (1)



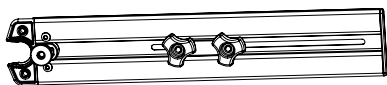
Long Leg (2)



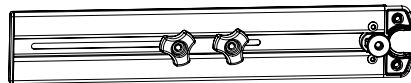
Middle Track Brace (1)



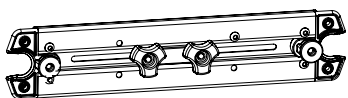
Short Leg (4)



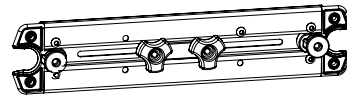
Take-Up Rail Bracket Right (1)



Take-Up Rail Bracket Left (1)



Left Front Rail Mount End (1)



Right Front Rail Mount End (1)

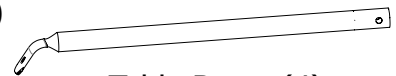


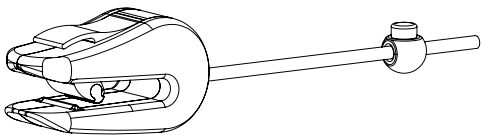
Table Brace (4)

120" Plastic Track (4)

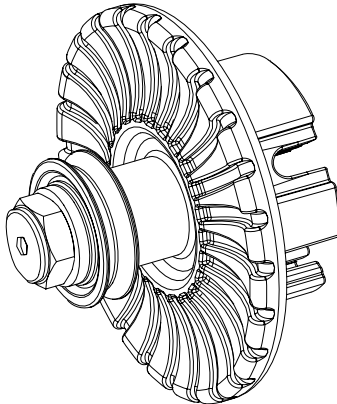
116" Plastic Tubing (4)

# Plastic Parts List

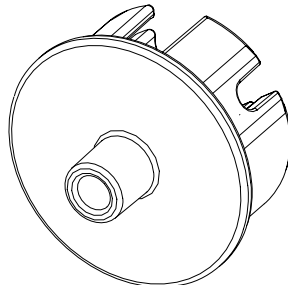
(Box 2 continued)



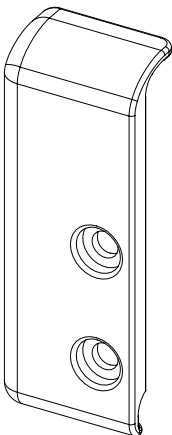
Bungee Clamps  
(4)



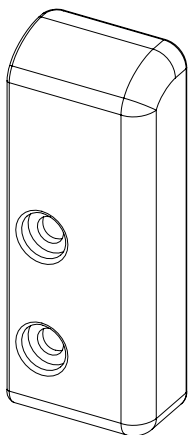
Ratchet  
Wheel  
(6)



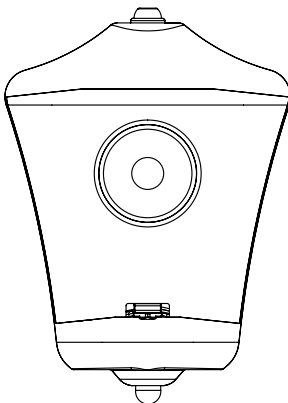
Fourth Rail  
End Cap  
(2)



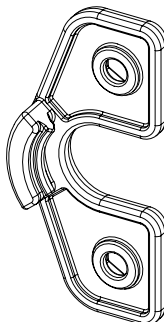
Right Frame  
Corner  
(1)



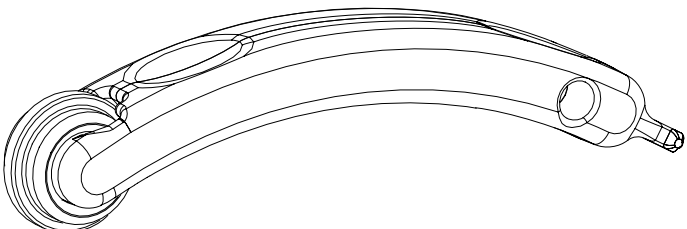
Left Frame  
Corner  
(1)



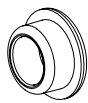
Laser  
(1)



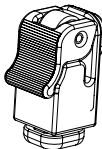
Ratchet Wheel  
Holder  
(2)



Fabri-Fast Tool  
(1)



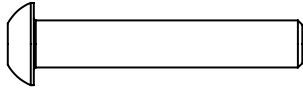
4th Rail Insert  
Washer  
(2)



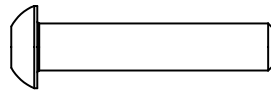
Sewing  
Machine  
Clamp  
(4)

# Hardware List

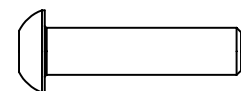
(Box 2 continued)



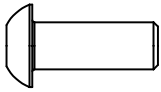
M6 x 35mm Socket Button Head Cap Screw (SBHCS) (4)



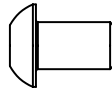
M6 x 30mm Socket Button Head Cap Screw (SBHCS) (8)



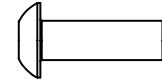
M6 x 25mm Socket Button Head Cap Screw (SBHCS) (4)



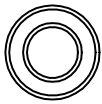
M6 X 16mm Socket Button Head Cap Screw (SBHCS) (8)



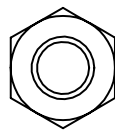
M6 x 10mm Socket Button Head Cap Screw (SBHCS) (110)



M5 X 16mm Socket Button Head Cap Screw (SBHCS) (24)



Steel Spacer (4)



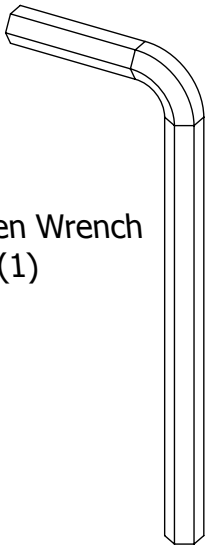
M8 Hex Nut (4)



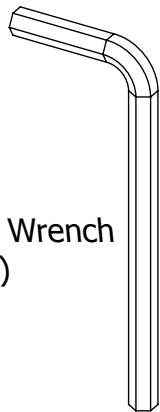
M6 Hex Nut (6)



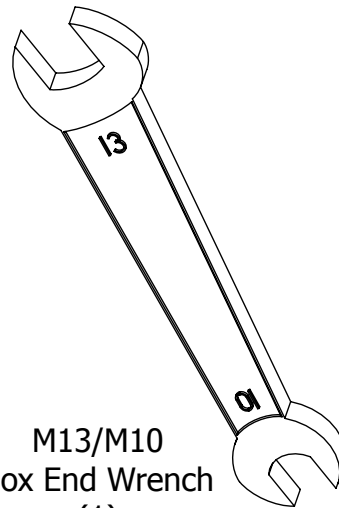
M6 X 10mm Set Screw (8)



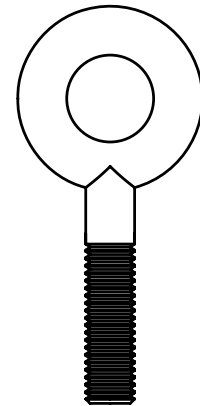
M4 Allen Wrench (1)



M3 Allen Wrench (1)



M13/M10 Box End Wrench (1)



M8 Eye Bolt (2)

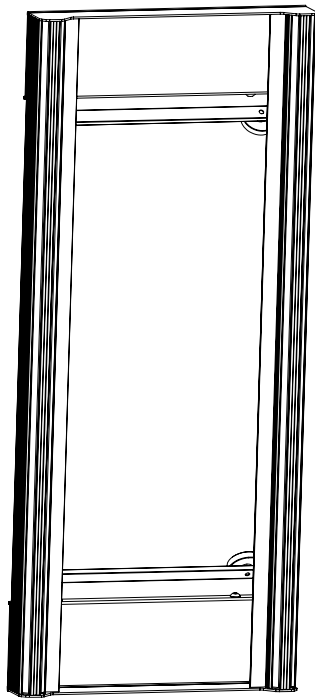
## Warranty Information

for your Grace Machine Quilting Frame

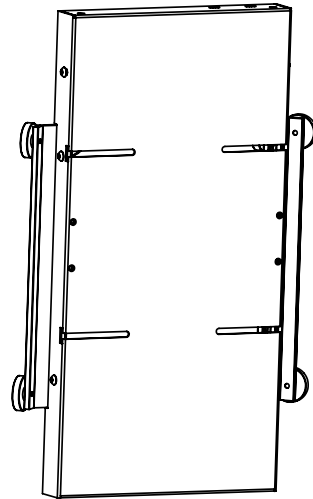
The Machine Quilting Frame has a One-Year limited warranty on all parts. The Grace Company will repair or replace, at its discretion, any part with problems due to our manufacturing, or defects in materials. This warranty does not cover parts damaged through misuse, improper storage, improper assembly, loss, natural events, or willful destruction. Parts must be returned to the Grace Company, shipping prepaid, before we can repair or replace them.

# Carriage Parts

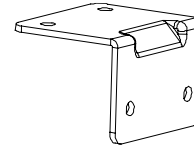
(Box 2 continued)



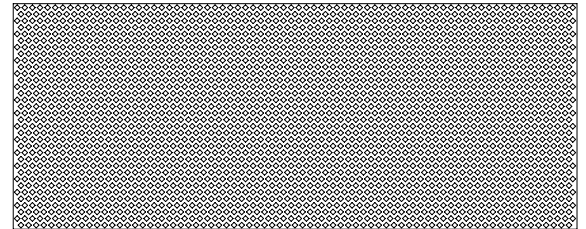
Carriage Bottom Plate (1)



Carriage Top Plate (1)



Pattern Perfect Bracket (1)



Non Skid Pad (1)

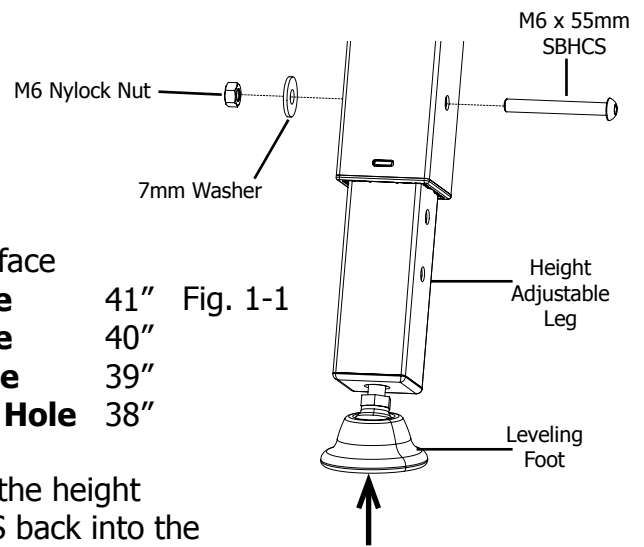
## Step 1: Height Adjustable Leg - Assembly

Parts Needed: 

- 4-Short Leg
- 2-Long Leg


Height of Fabric Surface

<b>Top Hole</b>	45"	<b>4th Hole</b>	41"
<b>7th Hole</b>	44"	<b>3rd Hole</b>	40"
<b>6th Hole</b>	43"	<b>2nd Hole</b>	39"
<b>5th Hole</b>	42"	<b>Bottom Hole</b>	38"



**1-1:** Unscrew a M6 X 55mm SBHCS from a leg and slide the height adjustable leg to the desired height. Then slide the SBHCS back into the Height Adjustable Leg and out the other end. Slide a washer on the end of the screw and tighten a nut onto the end of the screw. Follow this step again for the other five legs. Make sure all the legs are at the same height.

## Step 2: Side Leg - Assembly

Parts Needed: 

- 24-M6 x 10mm SBHCS
- 1-Right Track Brace
- 1-Left Track Brace
- 1-Right Lower Leg Brace
- 1-Left Lower Leg Brace
- 2-Short Leg
- 2-Long Leg

**Note:** Do not completely tighten the screws in this step until the end of Step 8.

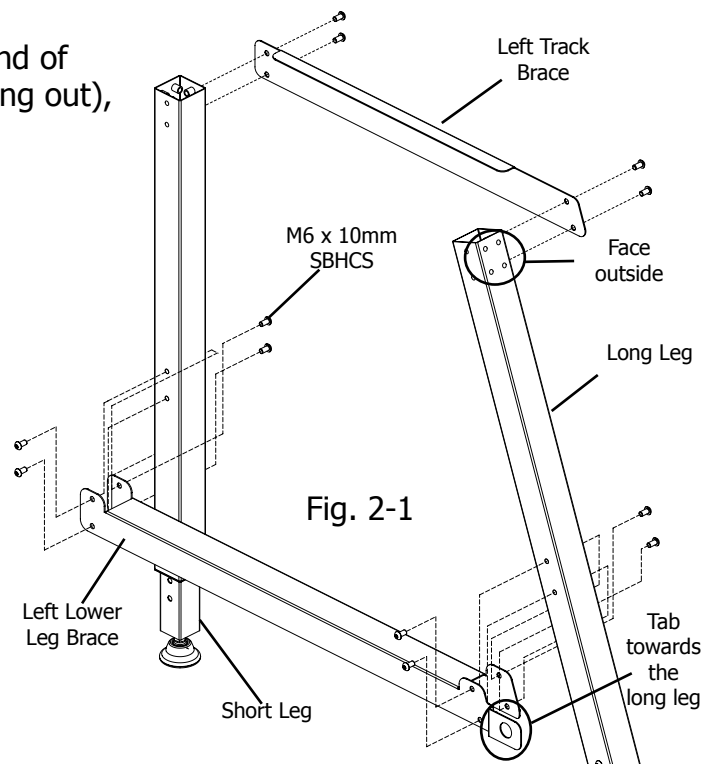
**Note:** Make sure the side of the leg with (4) holes faces the outside of the frame.

**2-1:** Slide the Short Leg inside the opening at the end of the Left Lower Leg Brace (side without the tab sticking out), and fasten it in place with (4) M6 x 10mm SBHCS.

**2-2:** Attach the long leg to the left lower brace, making sure the leg slides into the slot with the tab sticking out using (4) M6 x 10mm SBHCS, as shown in Fig. 2.1.

**2-3:** Attach the Left Track Brace to the short and long legs on the opposite side of the Left Lower leg brace tab with (4) M6 x 10mm SBHCS.

**2-4:** Repeat **Steps 2-1 through 2-3** to assemble the Right Leg.



### **Step 3: Middle Legs - Assembly**

Parts Needed: 

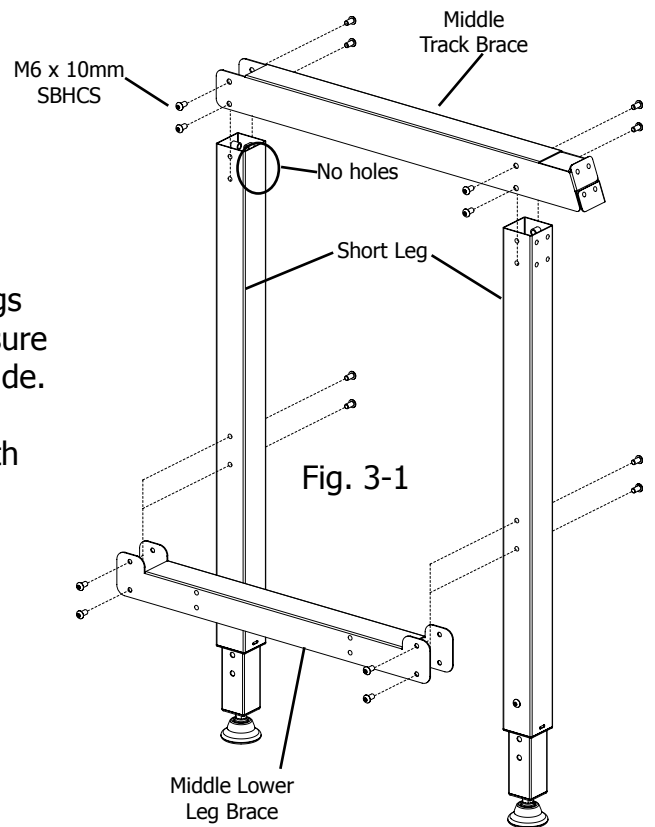
- 16-M6 x 10mm SBHCS
- 2-Short Leg
- 1-Middle Track Brace
- 1-Middle Lower Leg Brace

**Note:** Skip this step if setting up in crib.

**Note:** Do not completely tighten the screws in this step until the end of Step 8.

**3-1:** Attach the Middle Lower Leg Brace to the Middle Legs with (8) M6 x 10mm SBHCS, as shown in Fig. 3-1. Make sure that the side of the leg with no holes goes toward the inside.

**3-2:** Attach the Middle Track Brace to the Middle Legs with (8) M6 x 10mm SBHCS.



### **Step 4: Track Support - Assembly**

Parts Needed: 

- 16-M6 x 10mm SBHCS
- 8-M6 x 10mm Set Screws
- 1-Left Leg Assembly
- 1-Right Leg Assembly
- 1-Middle Leg Assembly\*
- 2-Front Track Support
- 2-Back Track Support
- 2-Front Top Track Support
- 1-Front Track Support Coupler
- 1-Back Track Support Coupler

**\*Note:** If you're setting the frame up in Crib Size you will need to use both Side Legs, not the Middle Leg as shown in Fig. 4-2b.



**Note:** Skip Steps 4-1 through 4-4, 4-7, 4-9, and 4-10 if setting up in crib size.

**4-1:** Slide the Back Track Support Coupler into the end of one Back Track Support with the two holes near the end. Tighten (2) M6 x 10mm set screws into the coupler through the Back Track Support, as shown in Fig. 4-1a.

**4-2:** Slide the other Back Track Support onto the coupler and tighten (2) M6 x 10mm Set Screws into the coupler through the Back Track Support.

**4-3:** Follow **Step 4-1 through 4-2** for the Front Top Track Support and coupler, as shown in Fig. 4-1b (not used until step 7).

**Note:** The Front Track Support attaches to the diagonal leg.

**4-5:** Attach the Back Track Support to the outside holes on the Left Leg Assembly with (2) M6 x 10mm SBHCS, as shown in Fig. 4-2a.

**4-6:** Attach the other end of the Back Track Support to the outside holes on the Right Leg with (2) M6 x 10mm SBHCS.

**4-7:** Tighten (4) M6 x 10mm SBHCS, through the Back Track Support and into the Middle Leg.

**4-8:** Attach the Front Track Support to the outside holes on the Left Leg Assembly using (2) M6 x 10mm SBHCS (if setting up in crib, attach one end of the Front Track Support to the Left Leg Assembly and the other end to the Right Leg Assembly).

**4-9:** Attach the other side of the Front Track Support to the inside holes on the Middle Leg with (2) M6 x 10mm SBHCS.

**4-10:** Repeat **Steps 4-8 through 4-9** for the other Front Track Support.

## **Step 5: Table Brace - Assembly**

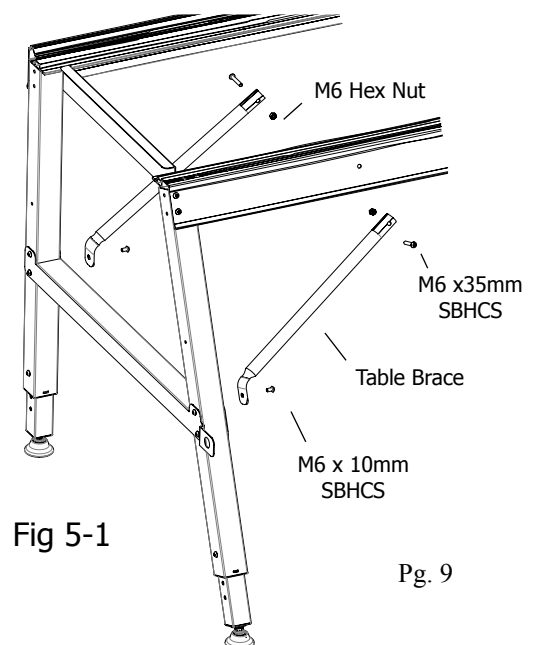
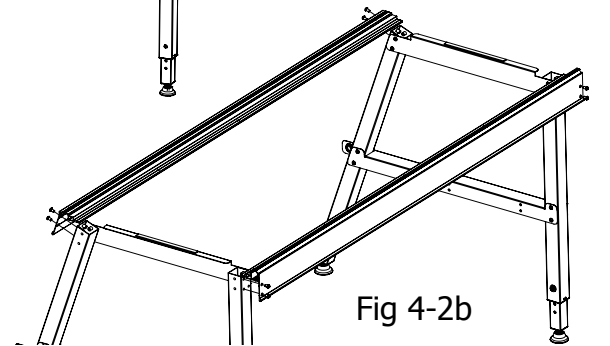
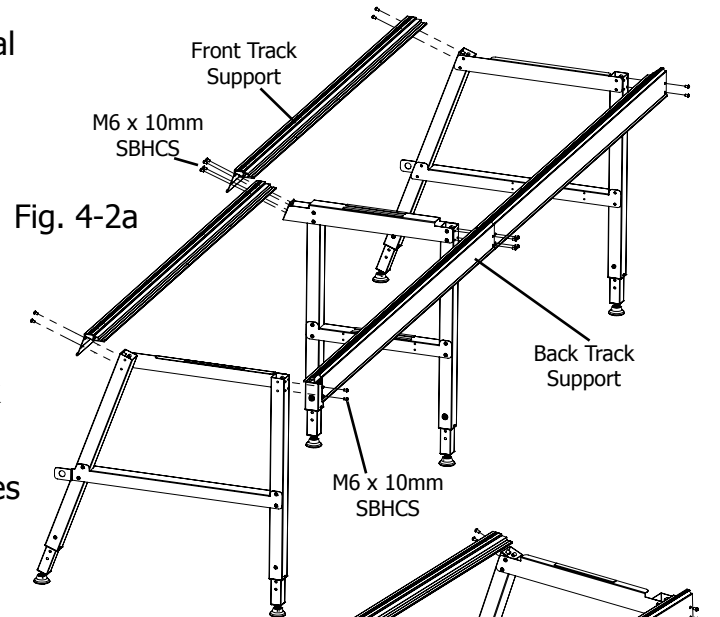
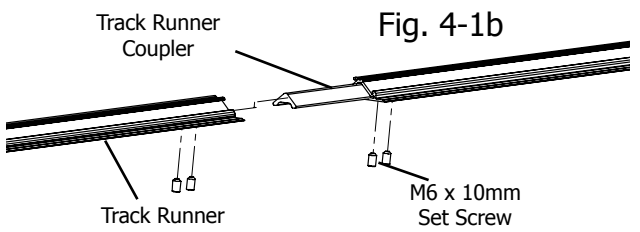
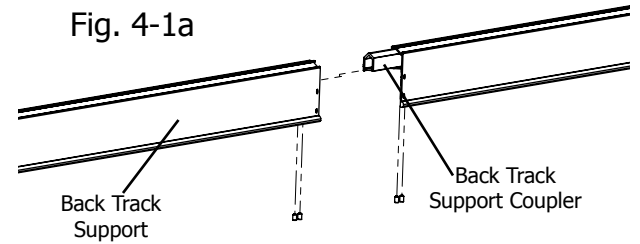
Parts Needed:



- 4-M6 x 10mm SBHCS
- 4-M6 x 35mm SBHCS
- 4-M6 Hex Nut
- 4-Table Brace

**5-1:** Attach (2) Table Brace to the left side of frame using (2) M6 x 10mm SBHCS and to the track supports using (2) M6 x 25mm SBHCS and (2) M6 Hex Nuts, as shown in Fig. 5-1.

**5-2:** Repeat **Step 5-1** for right side of the frame.



## **Step 6: Table Support - Assembly**

Parts Needed: 

12-M6 x 10mm SBHCS \*\* (6 for Crib)

6-Table Support (King) \*\* (3 for Crib)

**6-1:** Attach all (6) Table Supports to the Track Supports using (2) M6 x 10mm SBHCS, as shown in Fig. 6-1.

**Note:** The screws go through the Table Support flange first and then screw into the Track Support. The Table Support ends sit on top of the track's flange with the tape side up.

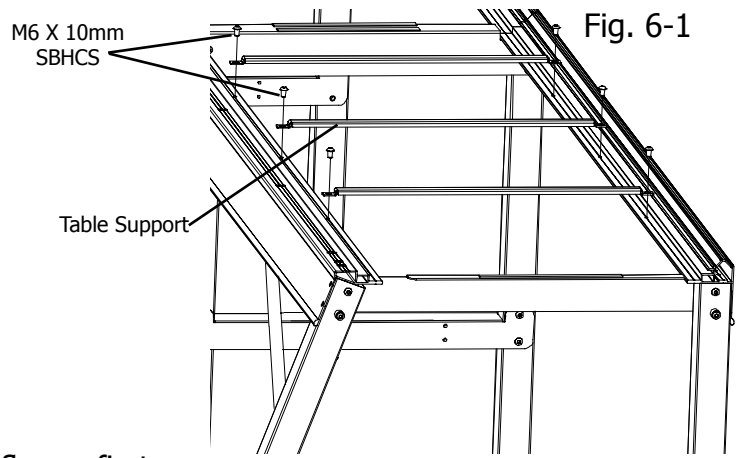


Fig. 6-1

## **Step 7: Table - Assembly**

Parts Needed: 

2-Tables (King)\*\* (1 for Crib)

**7-1:** Lay the Plastic Table on the Table Supports, **with the textured surface side UP**, as shown in Fig. 7-1.

**7-2:** Repeat **Step 7-1** so that both Plastic Table surfaces lay on the table assembly.

**Note:** The table should sit under the lip on the back track support. Then will be held down by the lip on the track runner in Step 8.

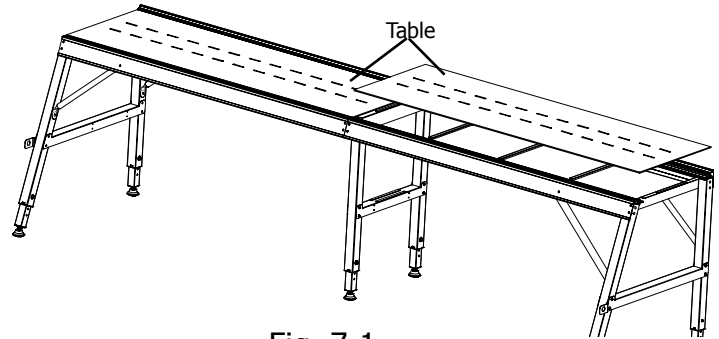


Fig. 7-1

## **Step 8: Track - Assembly**

Parts Needed: 

1- Front Top Track Support Assembly

8- M6 X 10mm SBHCS\* (4 for crib)

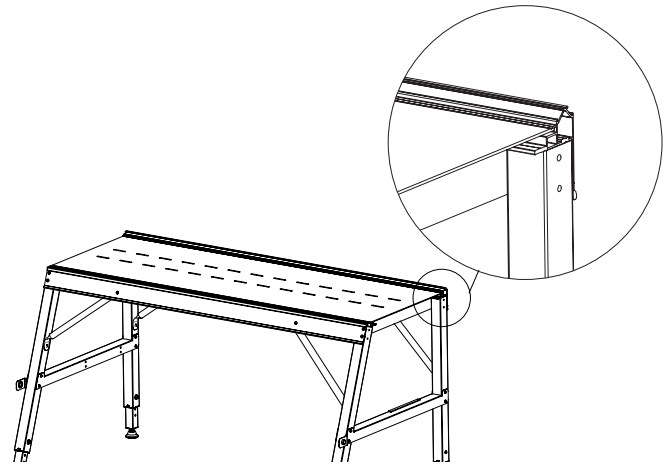
4-60" Crib Tracks\*

4-120" King Tracks\*\*

\*For Crib setup only.

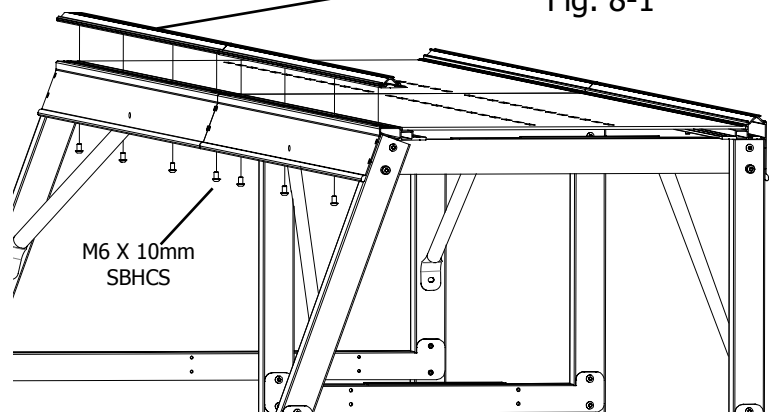
\*\* For King setup only.

**8-1:** Insert (8) M6 X 10mm SBHCS through the Front Track Support and into the Front Top Track Support Assembly as shown in Fig. 8-1. Do not tighten screws until Step 8-4.



Track Runner Assembly

Fig. 8-1



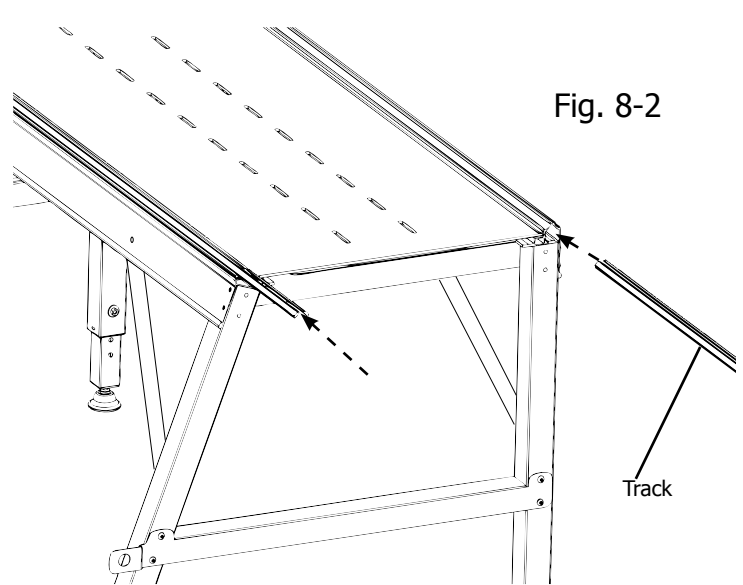


Fig. 8-2

**8-2:** Slide two pieces of Track into the Back Track Support, as shown in Fig. 8-2.

**8-3:** Slide two pieces of Track into the Front Top Track Supports.

**8-4:** Use the Bottom Carriage to align the Front Top Track Support, moving the carriage slowly down the track, stopping at each screw to tighten it in place, as shown in Fig. 8-3.

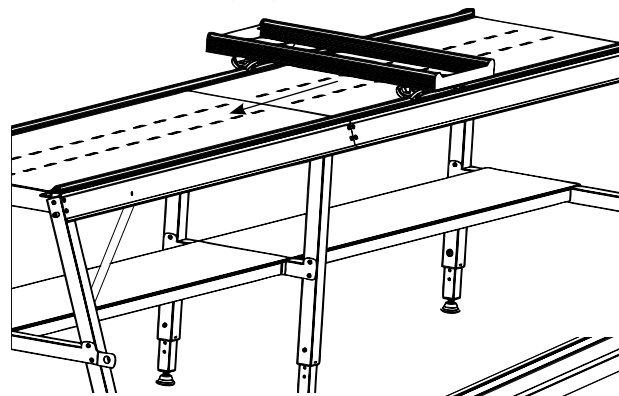


Fig. 8-3

## **Step 9: Frame End - Assembly**

Parts Needed: 

- 8-M6 x 10mm SBHCS
- 4-M6 x 25mm SBHCS
- 1-Left Frame End
- 1-Right Frame End
- 1-Left Frame Corner
- 1-Right Frame Corner
- 4-Spacers

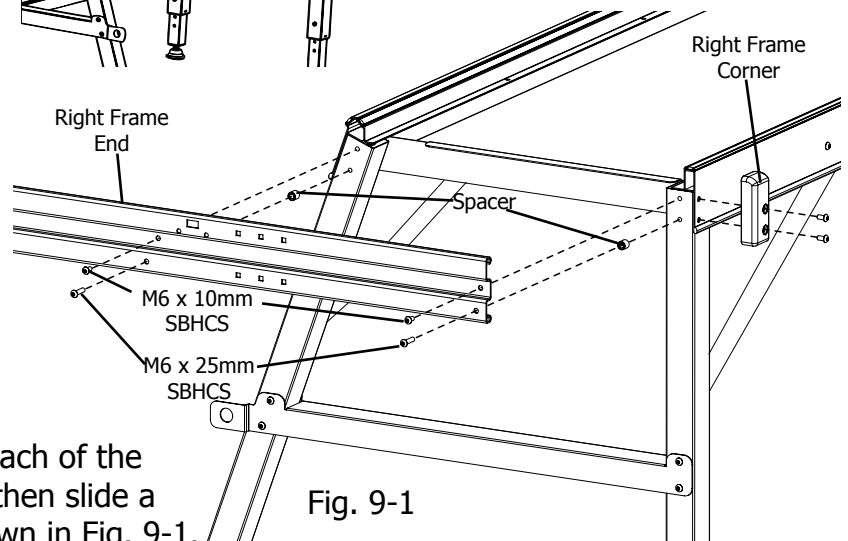


Fig. 9-1

**9-1:** Slide a M6 x 25mm SBHCS through each of the bottom holes in the Right Frame End and then slide a spacer on the end of those screws, as shown in Fig. 9-1.

**9-2:** Tighten the screws into the bottom holes in the right legs.

**9-3:** Screw a M6 x 10mm SBHCS through the top holes of the Right Frame End and Leg, as show in Fig. 9-2. Do not completely tighten the screws at this time.

**9-4:** Follow **Step 9-1 through 9-3** for the left side.

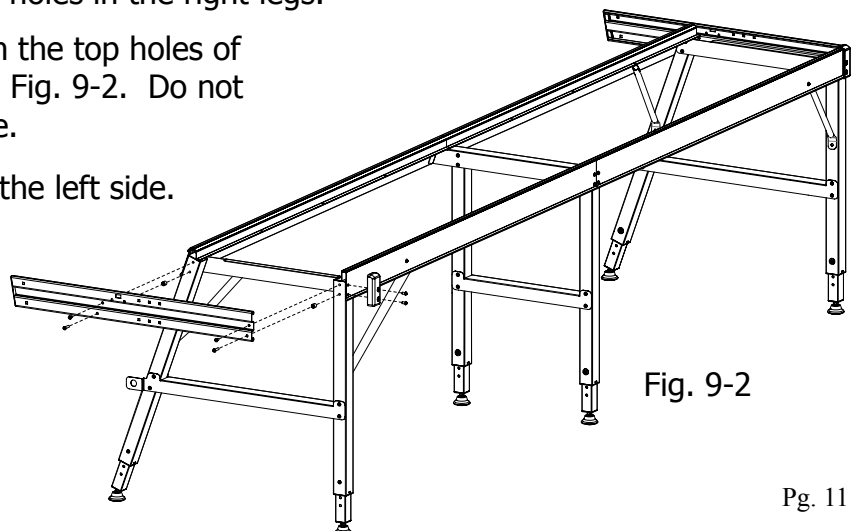


Fig. 9-2

**9-5:** Remove the two screws from the back corner of the right leg, as show in Fig. 9-1.

**9-6:** Place the Right Frame Corner over the Back Track Support and the Right Frame End.

**9-7:** Thread the removed screws into the Right Frame Corner and through the Back Track Support into the leg.

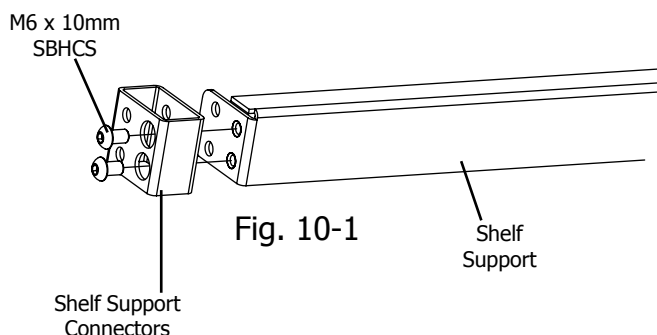
**9-8:** Follow **Step 9-5 through 9-7** for the left side.

**Note:** Completely tighten all the screws that were left loose in steps 2, 3 and 5. Make sure you start at one end of the frame and work your way to the other end keeping your track supports lined up as you go.

## **Step 10: Shelf Support - Assembly**

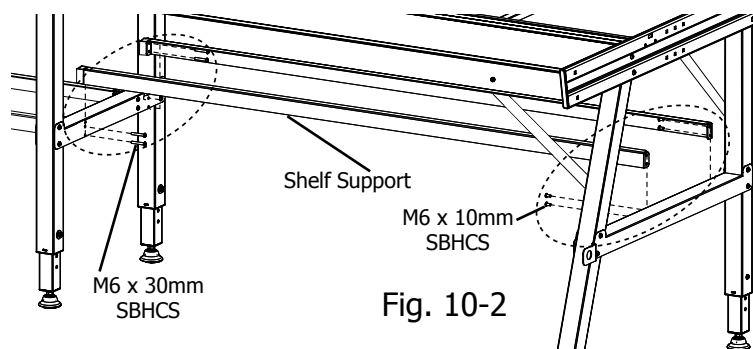
Parts Needed: 

- 16-M6 x 10mm SBHCS (King) (8 for Crib)
- 4-Shelf Support (King) (2 for Crib)
- 4-Shelf Support Connectors (King)
- 8-M6 X 30mm SBHCS (King)



**10-1:** Attach the Shelf Support Connector to the Shelf Support by inserting (2) M6 X 10mm SBHCS through the large holes in the shelf support connector and into the Shelf Support, as shown in Fig. 10-1.

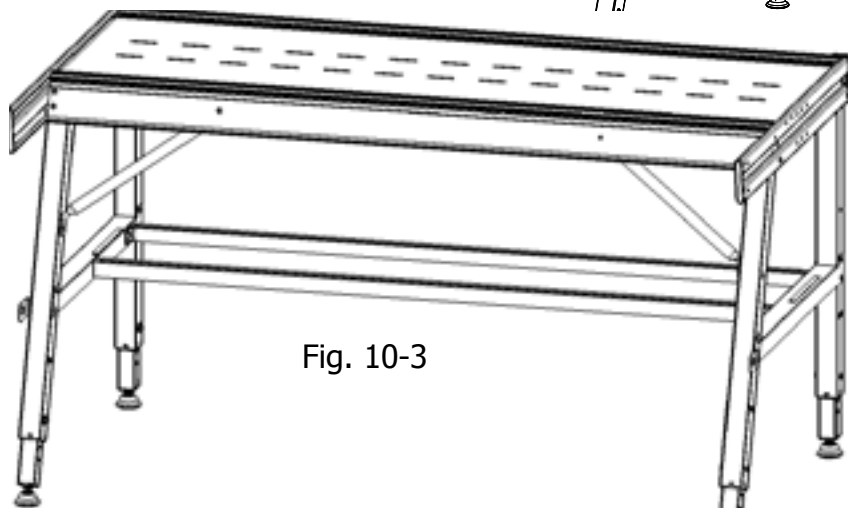
**10-2:** Attach the Shelf Support Connectors to the Middle Lower Leg Brace by inserting (2) M6 x 30mm SBHCS through the Shelf Support and the Shelf Support Connector and into the Middle Lower Leg Brace, as shown in Fig. 10-2.




**10-3:** Attach the other end of the shelf support to the Right Lower Leg Shelf Brace with (2) M6 x 10mm SBHCS.

**10-4:** Follow **Step 10-1 through 10-3** to attach the last three (3) shelf supports to the frame.

**Note:** For crib attach shelf supports to the Right and Left Lower Leg Braces using (4) M6x10mm SBHCS, as shown in Fig. 10-3.



## Step 11: Take-Up Rail Bracket - Assembly

Parts Needed: 

- 4-M6 Plastic Knob (pre-installed)
- 4-M6 X 25mm Carriage Bolt (pre-installed)
- 1-Take-Up Rail Bracket Right
- 1-Take-Up Rail Bracket Left

**11-1:** Remove (2) knobs and (2) M6 x 25mm carriage bolts from the Take Up Rail Bracket Left.

**11-2:** Slide (2) M6 x 25mm carriage bolts through the holes in the Left Frame End from the inside of the frame so the bolts go through the center slots, as shown in Fig. 11-1.

**11-3:** Slide the Take-up Rail Bracket Left onto the two bolts, followed by one plastic spacer. Then tighten a M6 Plastic Knob onto the end of each bolt.

**11-4:** Follow **Steps 11-1 through 11-3** for the right side.

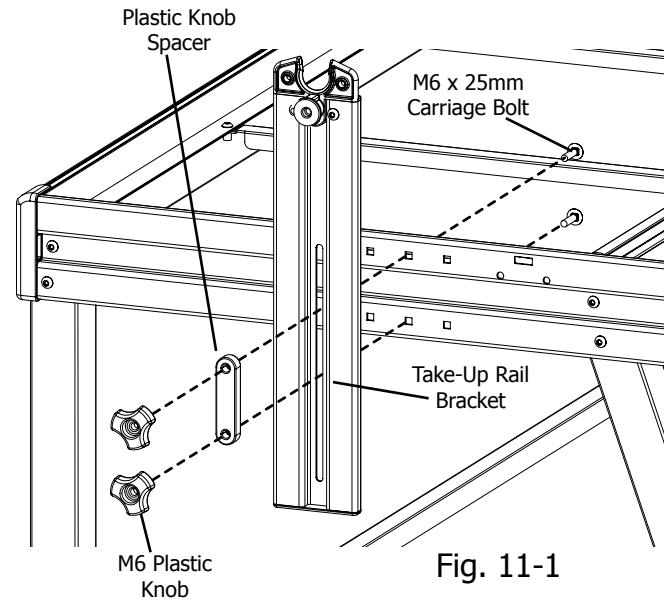


Fig. 11-1

## Step 12: Bungee Brace - Assembly

Parts Needed: 

- 4-M6 x 16mm SBHCS
- 4-M6 Hex Nuts
- 1-Right Bungee Clamp Brace
- 1-Left Bungee Clamp Brace
- 1-Right Front Rail Mount End
- 1-Left Front Rail Mount End

**12-1:** First, remove the screw from the top hole and keep the M6 x 16mm SBHCS and Hex Nut for use in this step. Now slide an M6 x 16mm SBHCS through each hole in the Left Bungee Clamp Brace, as shown in Fig. 12-1.

**12-2:** Slide the screws through the holes in the Left Front Rail Mount End.

**12-3:** Tighten the screws into the nuts.

**12-4:** Repeat **Steps 12-1 through 12-3** to complete the right side.

**Note:** On each of the Right and the Left Front Rail End Mounts, on the opposite side of the ratchet switches, is a letter (R,L) indicating which is the left and right side. Make sure the letter is right side up when attaching the bungee brace.

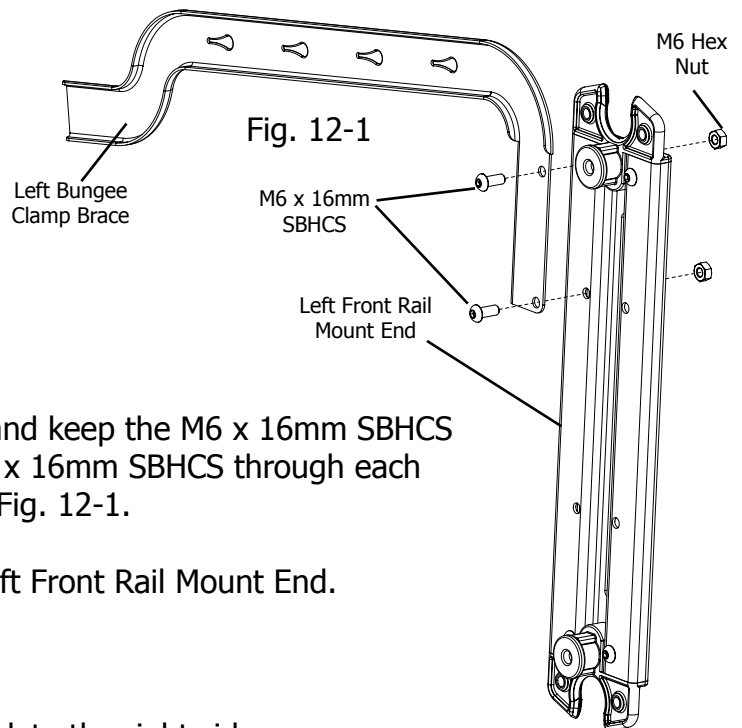


Fig. 12-1

## Step 13: Front Rail Mount End - Assembly

Parts Needed: 

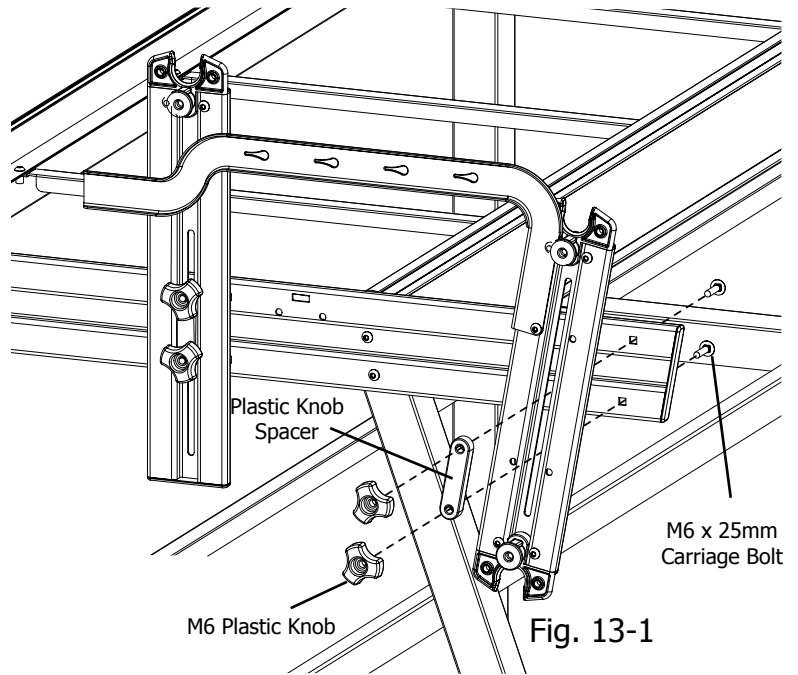
- 4-M6 Plastic Knob (pre-installed)
- 4-M6 X 25mm Carriage Bolt (pre-installed)
- 2-Front Rail Mount End Assemblies

**13-1:** Remove (2) knobs and (2) M6 x 25mm carriage bolts from the Left Front Rail Mount.

**13-2:** Slide (2) M6 x 25mm carriage bolts through the holes in the Left Frame End so the bolts go through the center slot, as shown in Fig. 13-1.

**13-3:** Slide the Front Rail Mount End onto the two bolts. Follow this with one plastic spacer and then tighten a M6 plastic knob onto the end of each bolt.

**13-4:** Repeat **Steps 13-1 and 13-3** for the right side.



## Step 14: Shelf - Assembly

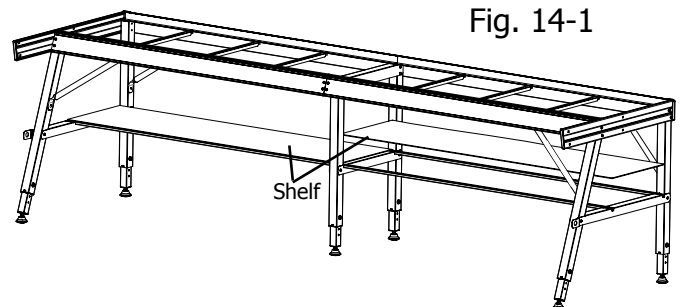
Parts Needed: 

- 2-Shelf (King) (1 for Crib)

**NOTE:** To prevent the shelf surface from being attached out of square, begin removing the backing from the tape, starting at one end of the Frame removing it only in one foot sections. Line up the shelf surface with the shelf braces, and press firmly in place before removing the next one foot section of tape backing. Repeat this process until both shelf surfaces are attached.

**14-1:** Attach the plastic shelf, **with the textured surface side UP**, to the Shelf Braces using the pre-installed double sided tape, as shown in Fig. 14-1.

**14-2:** Repeat **Step 14-1** so that both plastic shelf surfaces are attached to the table assembly.

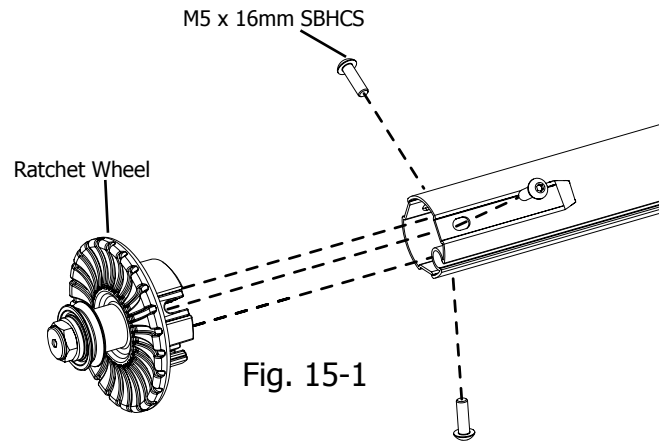


## Step 15: Rail - Assembly

Parts Needed: 

- 24-M5 x 16mm SBHCS
- 16-M6 x 20mm Set Screw \*(none for Crib)\*
- 8-Rail (King) (4 for Crib)
- 4-Rail Couplers (none for Crib)
- 6-Ratchet Wheels
- 2-Fourth Rail End Caps

\*(These are pre-installed in the coupler)



**Note:** For crib assembly only do steps 15-1, 15-2, 15-7, and 15-8.

**15-1:** On one end of (3) of the Rails, slide a Ratchet Wheel inside the rail, as shown in Fig. 15-1. Attach the Ratchet Wheel to the Rail with (3) M5 x 16mm SBHCS. Tighten the screw in a clockwise manner till they are completely tight.

**15-2:** Take one (1) of the remaining (2) Rails and, slide a Fourth Rail End Cap inside the Rail, as shown in Fig. 15-2. Attach the Fourth Rail End Cap to the Rail with (3) M5 x 16mm SBHCS. Tighten the screws in a clockwise manner till they are completely tight.

**15-3:** Take one rail with a Ratchet Wheel on it and on the opposite side of the Ratchet Wheel slide a Rail Coupler in the Rail so you can see the coupler holes through the Rail holes.

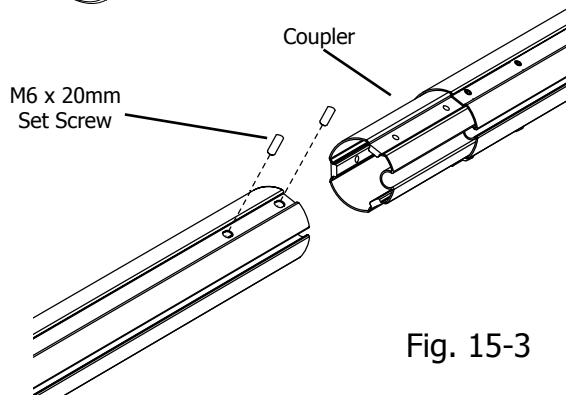
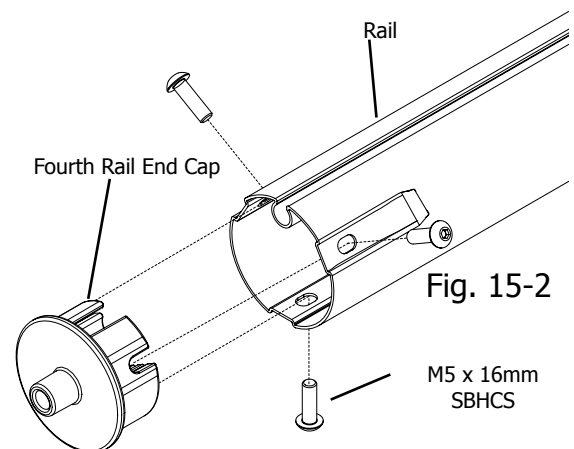
**15-4:** Attach the Rail Coupler to the Rails using the (2) M6 x 20mm Set Screw (preinstalled), as shown in Fig. 15-3. Tighten all the screws in a clockwise manner until they are all tight.

**15-5:** Slide another Rail over the other end of the Rail Coupler and attach the Rail to the Rail Coupler by using (2) M6 x 20mm Set Screw.

**15-6:** Repeat **Steps 15-3 through 15-5** for the remaining Rails.

**15-7:** Now on the opposite end of the Rails attach all the remaining Ratchet Wheels and the Fourth Rail End Cap as instructed in **Steps 15-1 and 15-2**.

**15-8:** Now check all the screws on all the Rails to make sure they are tight.

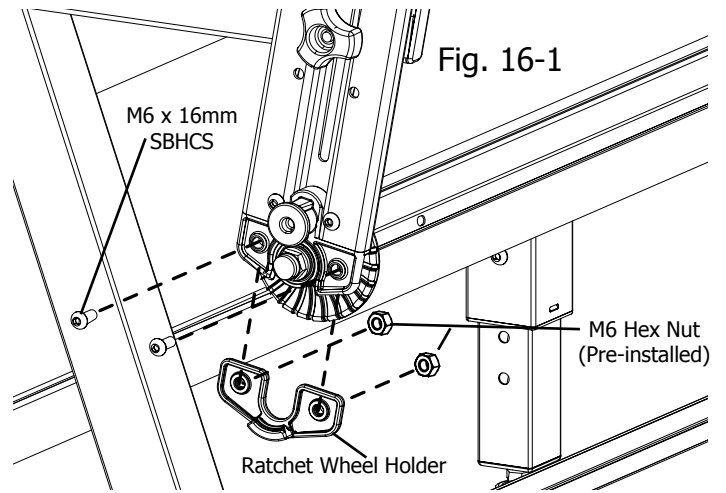


## **Step 16: Rail to Frame - Assembly**

Parts Needed: 

- 4-M6 x 16mm SBHCS
- 4-Rail Assembly
- 2-Ratchet Wheel Holder
- 2-4th Rail Insert Washer

**16-1:** Take one of the Rails with Ratchet Wheels and slide it up into the Front Rail Mount End until it clicks into place. Then place the ratchet wheel holder in between the Ratchet Wheel and Rail End as shown in Fig. 16-1.



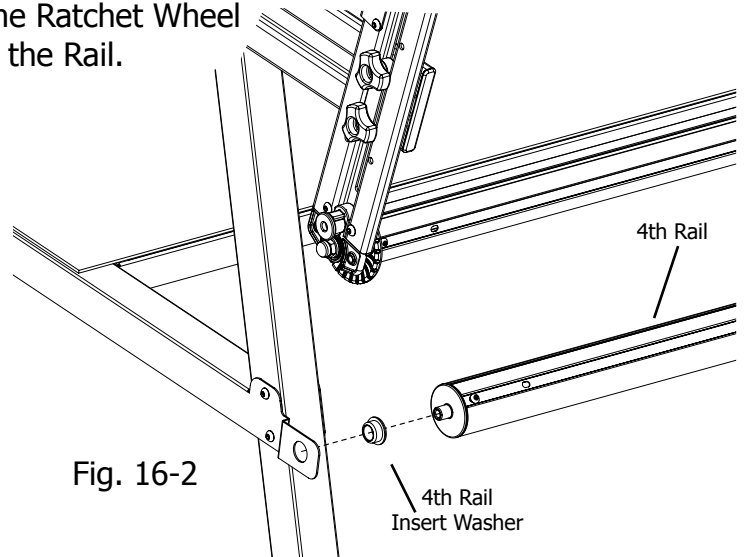
**16-2:** Screw (2) of the M6 x 16mm SBHCS into the Ratchet Wheel Holder. Follow the same step for the other side of the Rail.

**16-4:** Take another Rail with Ratchet Wheels and slide each side down into the Take-Up Rail Bracket and put some pressure on it until it clicks into place.


**16-5:** Take the final rail, with a Ratchet Wheel, and slide each side down into the Front Rail Bracket and put some pressure on it until it clicks into place.

**16-6:** Insert the 4th Rail Insert Washer, by pushing it into the hole, from the inside, in the tab on the angled leg.

**16-7:** Take the rail, with 4th Rail End Caps, and pop it into place, as shown in Fig. 16-2.



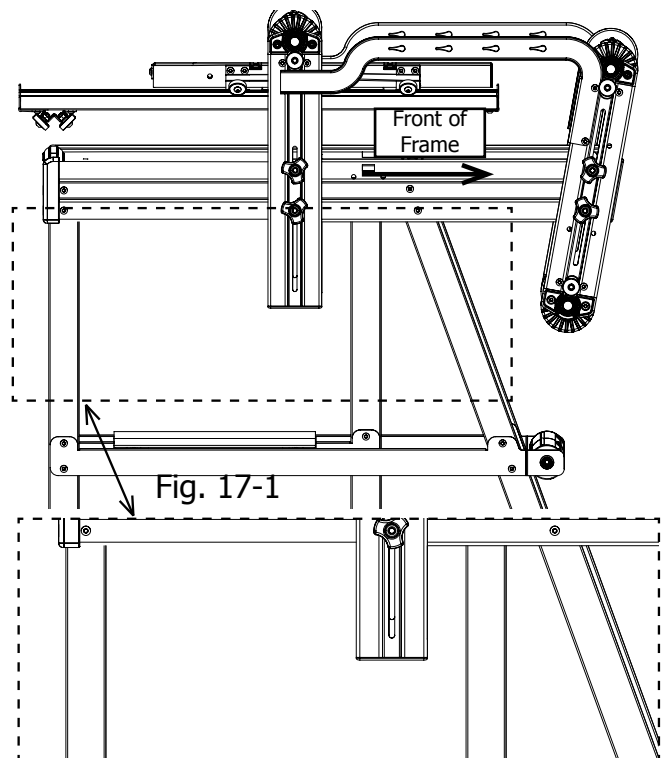
## **Step 17: Carriage to Frame- Assembly**

Parts Needed: 

- 1-Top Plate
- 1-Bottom Plate

**17-1:** Place the Bottom Plate on your frame, as shown in Fig. 17-1.

**17-2:** Place the Top Plate on the Bottom Plate.





## **Pattern Perfect Bracket** (optional accessory)

Parts Needed:

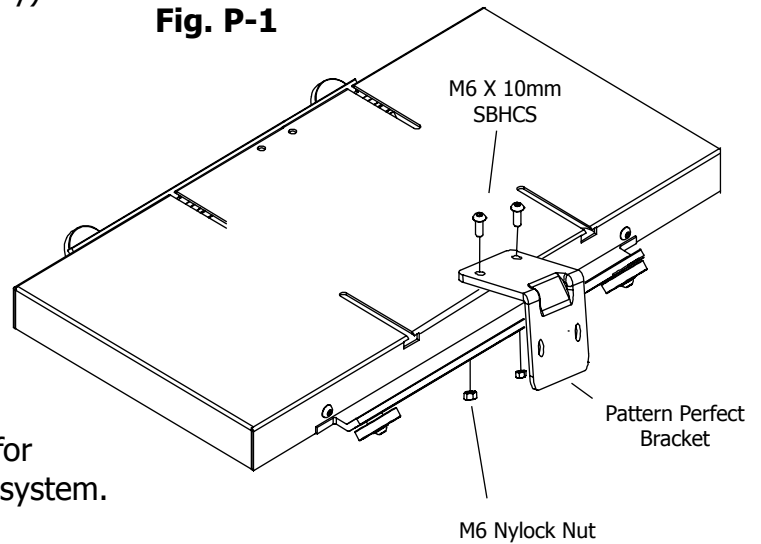


- 1-Pattern Perfect Bracket
- 2-M6 Nylock Nut
- 2-M6 X 10mm SBHCS

**Step 1-** Insert (2) M6 X 10mm SBHCS through the Pattern Perfect Bracket and Top Carriage the into (2) M6 Nylock Nuts, as shown in Fig. P-1.

**Note:** The Pattern Perfect™ Bracket is provided for installing the optional Pattern Perfect™ template system.

**Fig. P-1**



## **Laser-** (optional accessory)

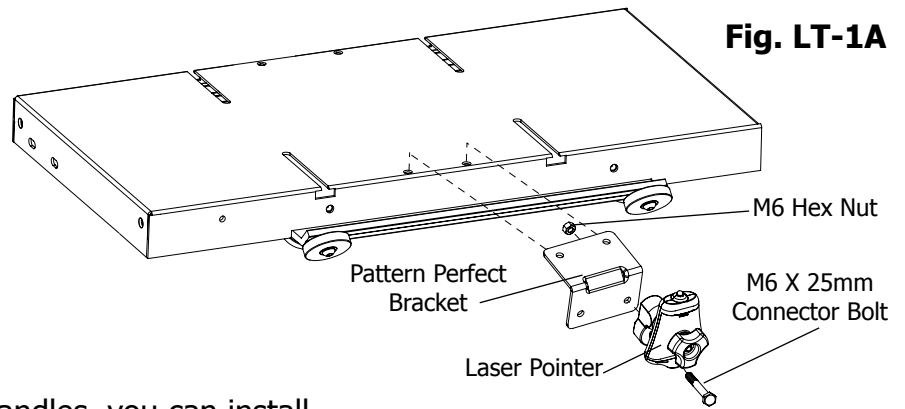
Parts Needed:



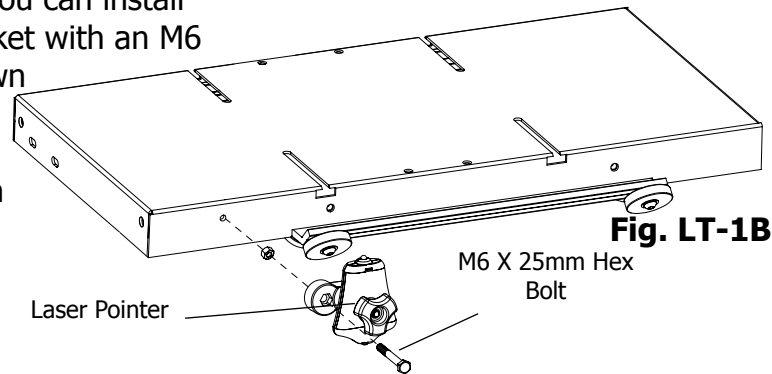
- 1-M6 Hex Nut
- 1-M6 X 25mm Hex Bolt
- 1-Laser Pointer
- 1-Pattern Perfect Bracket
- 1-Carriage Top Plate

**LT1-** If using the Top Plate without handles, you can install your Laser either on your pattern perfect bracket with an M6 X 25mm Hex Bolt and an M6 Hex Nut, as shown in Fig. LT-1A. You can also install the Laser in the pre-tapped side holes used for the handles with an M6 X 25mm SBHCS, as shown in Fig. LT-1B.

**Fig. LT-1A**



**Fig. LT-1B**



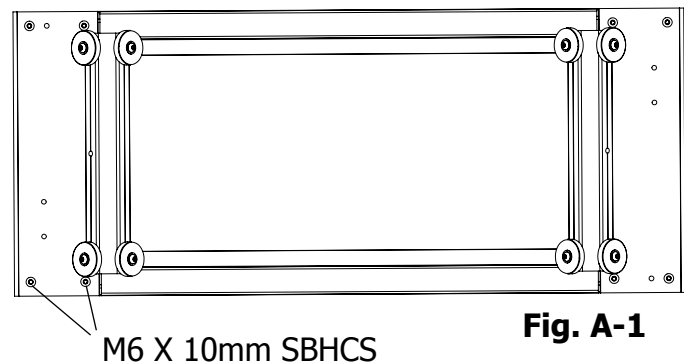
## **Adjusting Bottom Plate**

**Note-** Only adjust your bottom plate if your Top Plate won't sit square on your Bottom Plate, or your Bottom Plate track extrusions don't look parallel to each other and won't ride smoothly on your frame.

**A1-** Loosen **all (8)** M6 X 10mm SBHCS on the bottom Plate.

**A2-** With your Bottom Plate on your frame, push down on the Bottom Plate so all wheels are touching the track, then place your Top Plate on your Bottom Plate and make sure it rides smoothly on the Bottom Plate.

**A3-** Tighten **all (8)** M6 X 10mm SBHCS you loosened in Step A1.



**Fig. A-1**

## Congratulations! You have completed the assembly of your Quilting Frame.

All that remains is to install your fabric and begin quilting! (You'll notice you still have Bungee Clamps leftover. These will be assembled in conjunction with your fabric installation).

With the Grace Company's, specially designed Fabri-Fast rails, installing your fabric is easier on this Frame than on any other frame. Each rail has a Fabri-Fast slot and accompanying tubing. These work together to make your fabric installation much easier and faster than using tape, tacks, or Velcro®.

Before you begin, please locate the plastic Fabri-Fast tool included in your shipment.

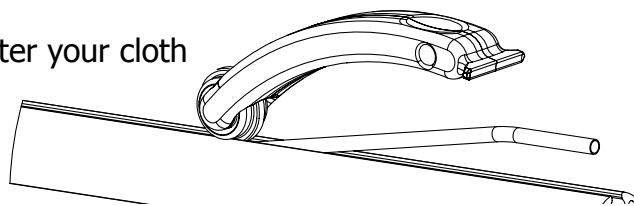
We recommend you begin with practice material allowing you to experiment with machine settings and stroke techniques.

**NOTE:** As you cut your fabric layers, we recommend making the quilt backing about 6-8" longer and 2-4" wider than your top. This will allow for a little give in the backing, especially if using thicker batting.

## Quilting Frame Fabric Installation

**Rail Rotation:** It is important that each rail rotates the correct direction to apply tension to your quilt layers correctly. Light tension is applied to your quilt fabric to remove wrinkles, and to allow the fabric to be sewn together consistently throughout the entire quilt. **The Ratchet Rail ends allow you to limit the direction that each rail rotates.** The ratchet can also be set to a neutral position by pulling the knob up and twisting it.

**Installing Fabric Layers onto the Rails (Preview):** Center your cloth lengthwise along the rail. Using Grace's Fabri-Fast™ System, take a piece of plastic tubing (cut to the appropriate length), and, holding your fabric to the slot (lining up the edge), press the tubing over the fabric and into the slot. Use the Fabri-Fast tool to press the rest of the tube and fabric in quickly and easily.



**Methods of Installation:** **1:** The recommended method for installing fabric onto the rails is to apply your fabric layers directly to the rails. **2:** You may also make and use **Cloth Leaders**.

**OVERVIEW:** *This is an outline to show which fabric layer goes onto each rail, and the direction that each rail should rotate.*

**Step 1:** Install Batting to Batting rail and roll up.

**Step 2:** Install Quilt Top to the Quilt Top rail and roll up.

**Step 3:** Install Backing to Backing rail and roll up.

**Step 4:** Attach Quilt Layers to Take-Up rail.

## Step 1: Batting

**NOTE:** A light, bonded batting is recommended.

**1-1:** Center the batting on the batting rail and attach one end of the batting using the Fabri-Fast tubing. (NOTE: Fabri-Fast tubing will work with most batting, however, if the batting is too thick to squeeze into the slot, you may tape the batting to the rail to keep it in place).

**1-2:** Roll the batting onto the rail. The direction that you roll the batting onto the rail doesn't matter. The important thing to watch when rolling batting onto the rail is that the batting isn't stretched (See Fig. 1-1).

## Step 2: Quilt Top to Quilt Top Rail

**2-1:** Determine which end of your quilt will be the front.

**2-2:** Place the quilt top onto the table surface with its finished side facing up. Line up the center of your fabric layer with the center of the quilt top Rail. Attach the back edge of your quilt top to the quilt top rail. This is to be done with the finished side of the fabric facing up. Do not stretch or pull the fabric during this process. Let it lay as naturally as possible.

**2-3:** Roll your quilt top onto the Quilt Top Rail completely. Again, be sure the fabric stays lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out, being very careful not to stretch or pull the fabric excessively.

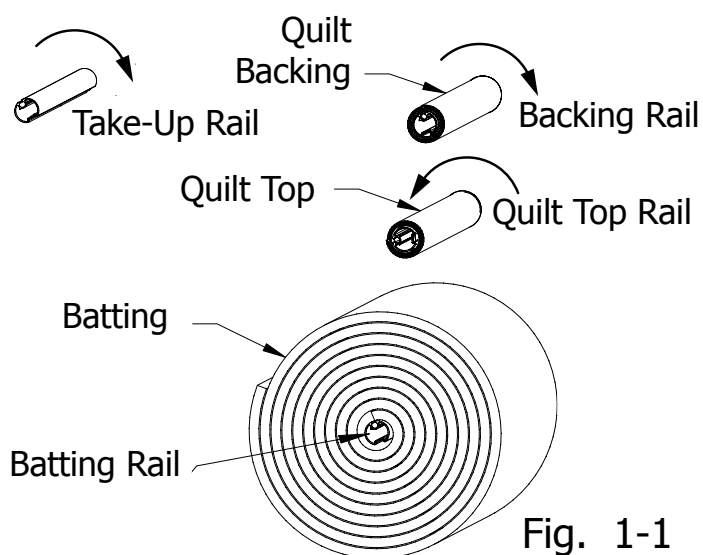


Fig. 1-1

## Step 3: Quilt backing to Backing rail

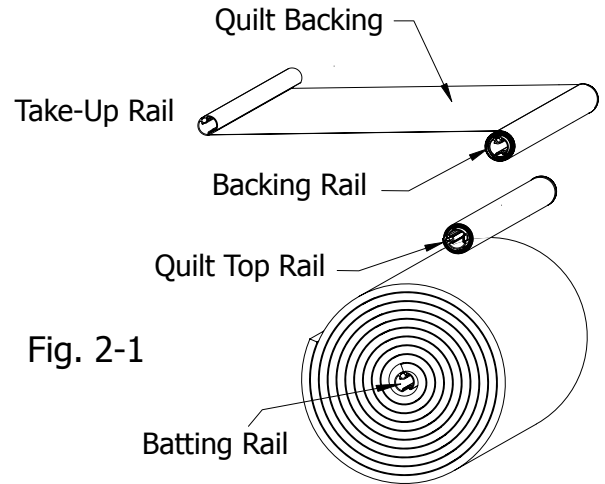
**3-1:** To begin, determine which will be the front and back edges of your quilt backing. (Your quilt can't exceed (110" wide) the maximum quilt width of your Quilting Frame. Your quilt's length is not limited)

**NOTE:** If your backing is made up of more than one piece of fabric, cut your selvages off and flatten out the seams with an iron to allow the backing the proper give it needs.

**3-2:** Place your quilt backing onto the table surface good side down. Line up the center of your fabric layer with the center of the Backing Rail. Attach the backing with its finished side of the fabric facing the rail. Do not stretch or pull the fabric during this process. Let it lie as naturally as possible.

**3-3:** Roll your backing onto the backing rail completely. Watch to make sure the fabric stays lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out. However, be very careful not to stretch or pull the fabric excessively.

**NOTE:** It is important that you roll the rail the proper direction so the fabric rolls onto the quilt top rail the right way (If the rail always rotates the correct direction, as indicated in Fig. 1-1 you will avoid potential problems with the quilt fabric).



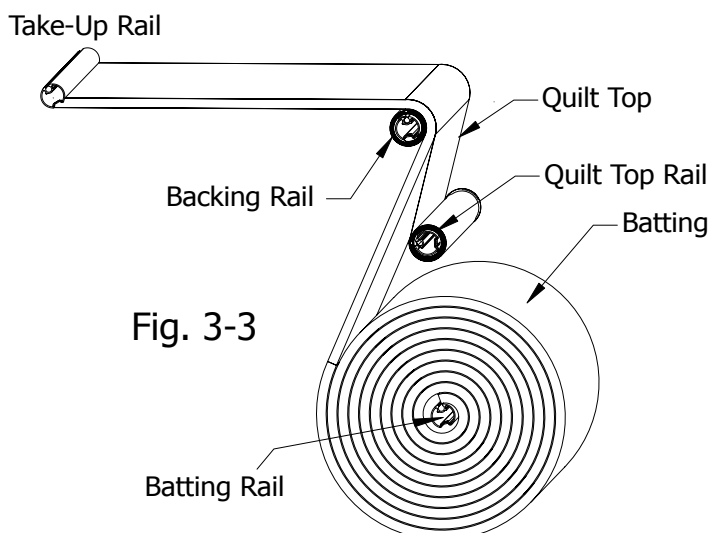
#### Step 4: Attaching Quilt Layers to the Take-Up Rail.

**4-1:** Put the Take-Up Rails Ratchet into position, to ensure that it always rotates the correct direction.

**4-2:** Take the end of the quilt backing and attach it to the take-up rail with the Fabri-Fast tubing, be careful to not stretch your fabric. Roll the Backing Rail to apply just enough tension to the Backing fabric. The fabric should be loose, but not sagging.

**4-3:** Next, bring your **Batting** up in **between** the **Quilt Top Rail and Backing Rail** and drape over the Backing. Lay it along the edge of the Take-Up Rail (See Fig. 3-3).

**4-4:** Bring the edge of the **Quilt Top** up over the **Backing and Batting** and lay it over the batting along the Take-Up Rail. Pin your Top and Batting to the Backing, in a straight line along the edge of the Take-up Rail. You may also baste the edge with your sewing machine.



You are now ready to sew your desired patterns onto your quilt.

### **Rolling your fabric**

When you have completed your work area and are ready to roll to the next, simply switch the Quilt Top, and Backing Ratchets into the unlocked position, allowing them to roll freely. Roll the Take-Up Rail forward, rolling the sewn quilt area onto that rail. After you have advanced your quilt to the next location, move each Rail's Ratchet lever to it's pre-determined position, and re-apply just enough tension to hold the fabric up without sagging, and without stretching the fabric.

TIP! As you roll the quilt forward, the quilt will accumulate on the Take-Up Rail. Raise the Take-Up Rail Bracket as needed, so that the bottom of the rolled up fabric stays about 1/16" above the sewing machine base. Failing to do so will cause your Carriage Assembly to roll less smoothly.

### **Turning Quilt Around** (This will enable you to quilt the entire quilt surface.)

Step 1: Begin pin basting your quilt when the quilt rolled up onto the Take-Up Rail is larger than desired. Pin baste all of the remaining un-quilted material.

Step 2: Detach the individual layers of fabric from their rails (Backing, Top, and Batting) and roll them up onto the Take-Up Rail. (Keep The quilt attached to the Take-Up Rail.)

Step 3: Remove the Backing Rail. Remember to support the rail to prevent the Rail Ends from being broken. Temporarily place the rail on the floor in front of your quilting frame. (We recommend having someone help you with this step and also with step 4.)

Step 4: Remove the Take-Up Rail (with quilt rolled onto it) and put it into the highest notch in the Fabric Layers Rail Brackets (the Backing Rail Location), making it the New Backing Rail. Now put the other rail in the Take-Up Rail location, making it the New Take-Up Rail.

Step 5: Attach the (quilt) two layers of fabric, and the batting to the New Take-Up Rail, using the Fabri-Fast Tubing.

Step 6: Roll the quilt off of the New Backing Rail, onto the New Take-Up Rail. Place the New Take-Up Rail's ratchet into the locked position.

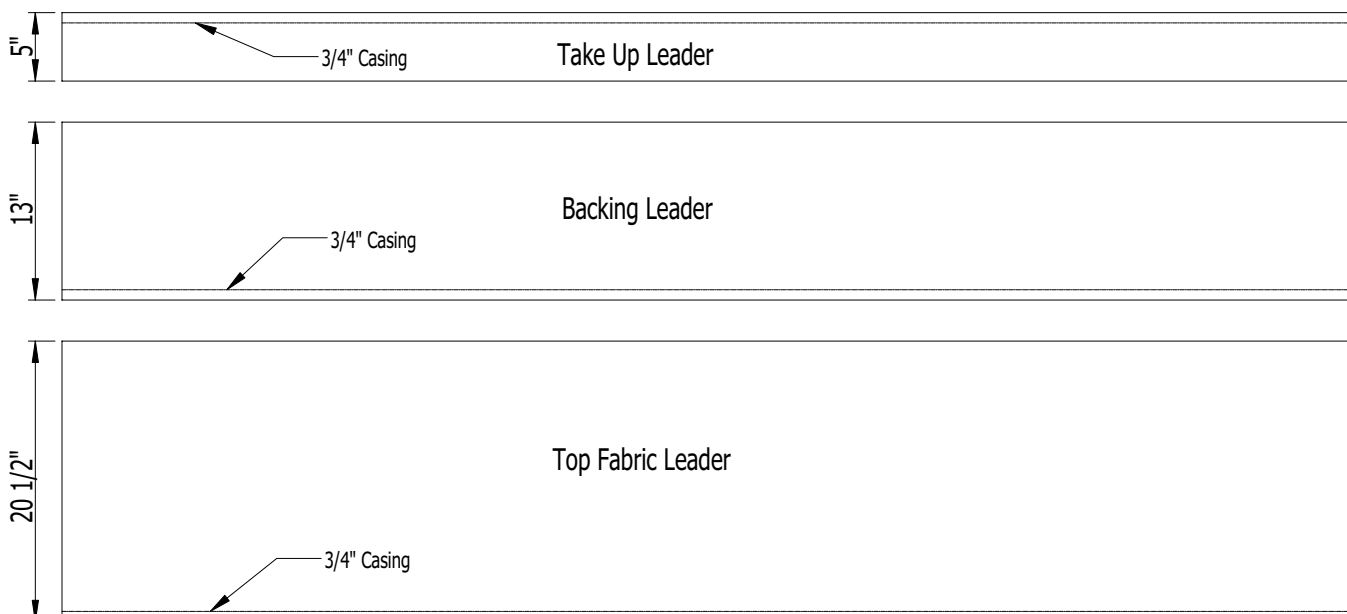
Step 7: Place the ratchet in neutral and roll the quilt back onto the other rail with its ratchet is in the locked position until you can see the area where you left off quilting.

Step 8: Place the ratchet on the New Take-Up Rail in the locked position, add a little tension to your fabric and you are ready to begin quilting again.

NOTE: As you advance to the next area roll the fabric off of the Take-Up Rail and out of the throat of the sewing machine and your finished quilt will now be rolled up onto the Backing Rail at the front of the frame rather than onto the Take-Up Rail.

## Making Cloth Leaders

- 1: First, select your cloth leader material. We recommend using a good quality muslin or similar fabric that has a good thread count. Be aware, however, that if the fabric is too thick, it may prove more difficult getting it installed into the rail slot.
- 2: Surge or hem your cloth leaders on all sides.
- 3: Make cloth leaders in the following widths. (The recommended length is 105", this length will accommodate any width of quilt that can be made on your Quilting Frame.)
- 4: Make a dashed line along the length of your leader about 1/2" in from the edge with a pen or marker. You will use this as a guide to help you insert your leader into the slot in straight line.  
(OPTIONAL: For a straighter cloth leader installation, some may consider it easier to make a hem and then push the tubing into the hem before installing it into the slot. If you wish to do this, create a hem on one end of each leader by folding over the fabric one inch (1"), and, using your foot pedal as a guide, stitching the fabric together 3/4" from the fold. This will leave about 1/4" of fabric beyond the stitching. Leave the edges open on both ends. You may then slide your tubing into the hem, Fig. CL1-1).
- 5: Mark each cloth leader at the center (length-wise).
- 6: Mark (or baste) a straight line about 1/2" in from the opposite (non-hemed, or non-dashed) end of the leader. This will be the line to which you attach your fabric layer.
- 7: Center your cloth leader lengthwise along the rail. Using Grace's Fabri-Fast™ System, take a piece of plastic tubing (cut to the appropriate length), and, holding your cloth leader to the slot (lining up the dashed line), press the tubing over the leader and into the slot. Use the Fabri-Fast tool to press the rest of the tube and fabric in quickly and easily. (If you have made a hem, line up this hem w/ tubing over the slot and press it into the slot using the Fabri-Fast tool.
- 8: With Cloth Leaders in place, pin your Quilt Fabric to the Leaders, rather than attaching it directly to the Rails.



## **Bungee Clamp Installation**

There are 4 Bungee Clamps provided with your Quilting Frame. The Bungee Clamps allow you to easily add side tension to your quilt fabric. Clip your Bungee Clamps to the quilt fabric, then insert the loose Bungee end through the Bungee Holder and bungee stop. Apply some tension to the Bungee then slide the bungee stop to retain tension.

## **Sewing Machine Clamp Installation**

To install the sewing machine clamps to hold the sewing machine in place on the carriage, flip the lever up to open the clamp then slide the base of the clamp into the slot on the carriage top plate so that it is snug against your machine. Flip the lever down to lock the clamp into place.

## **Optional Accessories**

There are many optional accessories available for your Quilting frame.

**Lamp Holder Accessory:** Your Quilting Frame was shipped with Lamp Brackets, as well as the hardware required to attach the brackets. The Lamp Brackets are easily attached to the Handle Braces. Lamps, and other accessories can be attached to the Lamp Brackets. You can purchase a Lamp from the Grace Company web site, [www.graceframe.com](http://www.graceframe.com), or by calling Your Grace Company Distributor.

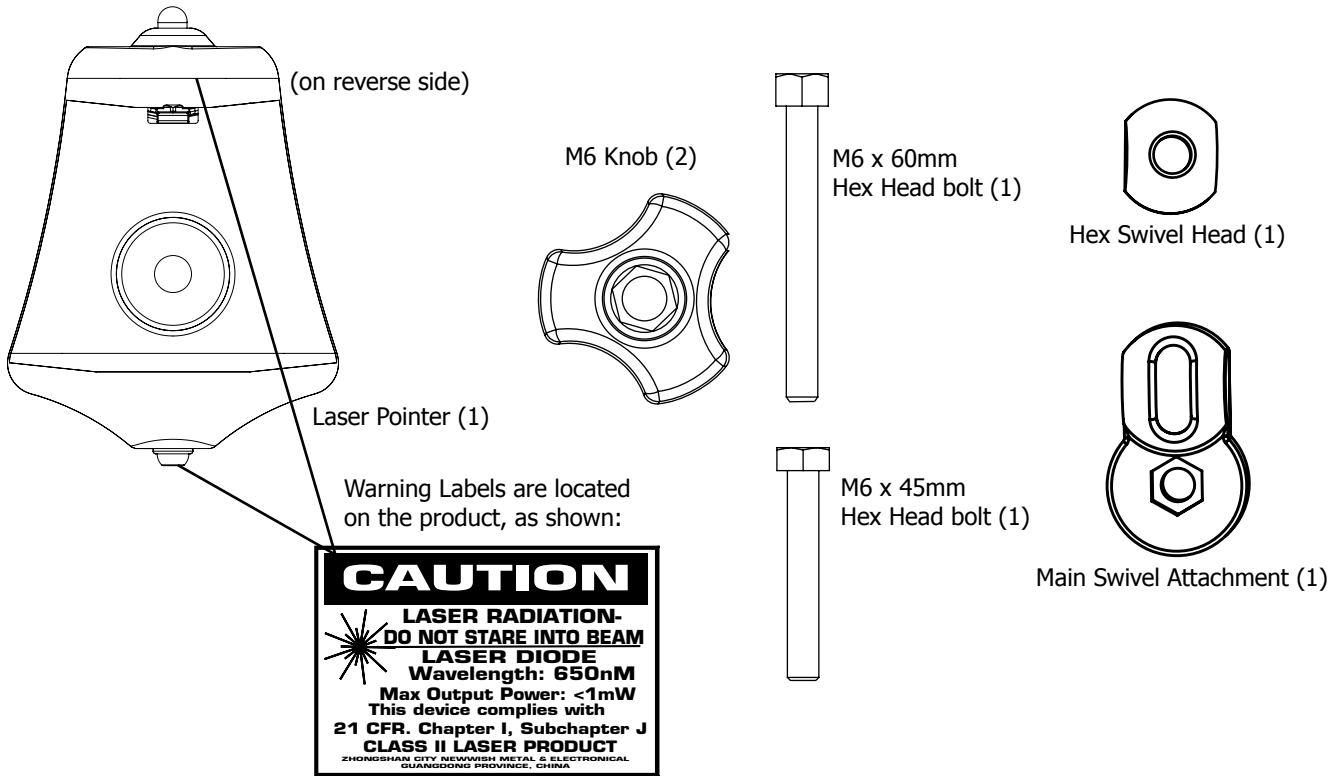
## **Sewing Tips**

- Be careful not to sew too close to the edge, to prevent hitting your Bungee Clamps, or running off the edge of the quilt. Also, if you are using side leaders, avoid accidentally stitching the leaders to your quilt.
- If your quilt will fit onto your frame Length-wise attach your quilt's fabric to the rails along it's length. You will have to roll the quilt less often, since your work surface will be as large as possible. Also, the quilt will not be as fat under the arm of the machine when you get to the end.
- You will need 4-5 bobbins to quilt a small sized quilt (less than a queen).
- Make sure to turn off your sewing machine any time you leave your quilting room, especially if you are using the peddle pushing mechanism. If the mechanism pushes the pedal at all it may cause your sewing machine and peddle to get very hot.
- Keeping the fabric on the Take-Up Rail touching the bed of the sewing machine, instead of above the bed yields better results. If the fabric is too high off the bed, bouncing will occur.
- When rolling the quilt, pull the batting a little to each side to make sure that it is not bunching. After rolling and tightening all the rollers, check under the quilt to see that the back is smooth.

# The Gracie Laser User Manual

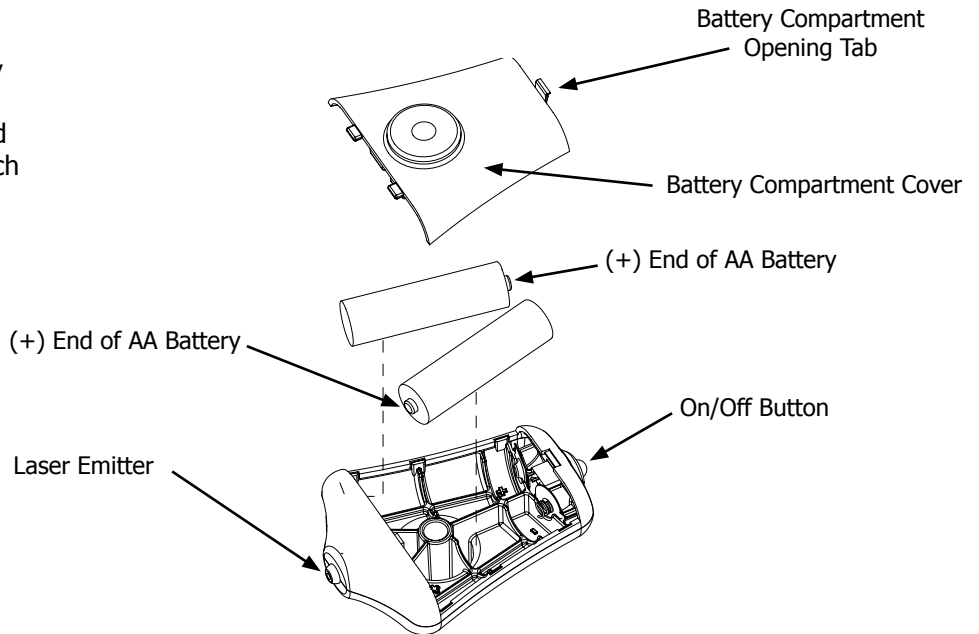
## Parts List

### SAFETY PRECAUTIONS



1. CAUTION: Use of controls, adjustments, or performance of procedures other than given in USER MANUAL may result in hazardous laser light exposure.
2. This product is safe to use in normal operations as described in these instructions. **AVOID DIRECT EYE EXPOSURE. DO NOT LOOK DIRECTLY INTO THE LASER EMITTER.**

**Battery Installation:** Use the battery compartment opening tab to remove the battery cover. Batteries are inserted with their positive pole (+) opposite each other. (Illustration shown)



### Specifications:

Power:	Class II
Wavelength:	650nm
Output Power:	1mW
Battery Type:	2 AA
Battery Life:	150 Continuous hours
Weight:	31.2g Without Batteries
Dimensions:	6.929" L X 1.533" W
Color:	Blue

The Grace Company certifies that the Gracie Laser complies with the government FDA regulation 21CFR 1040.10 and 1040.11.