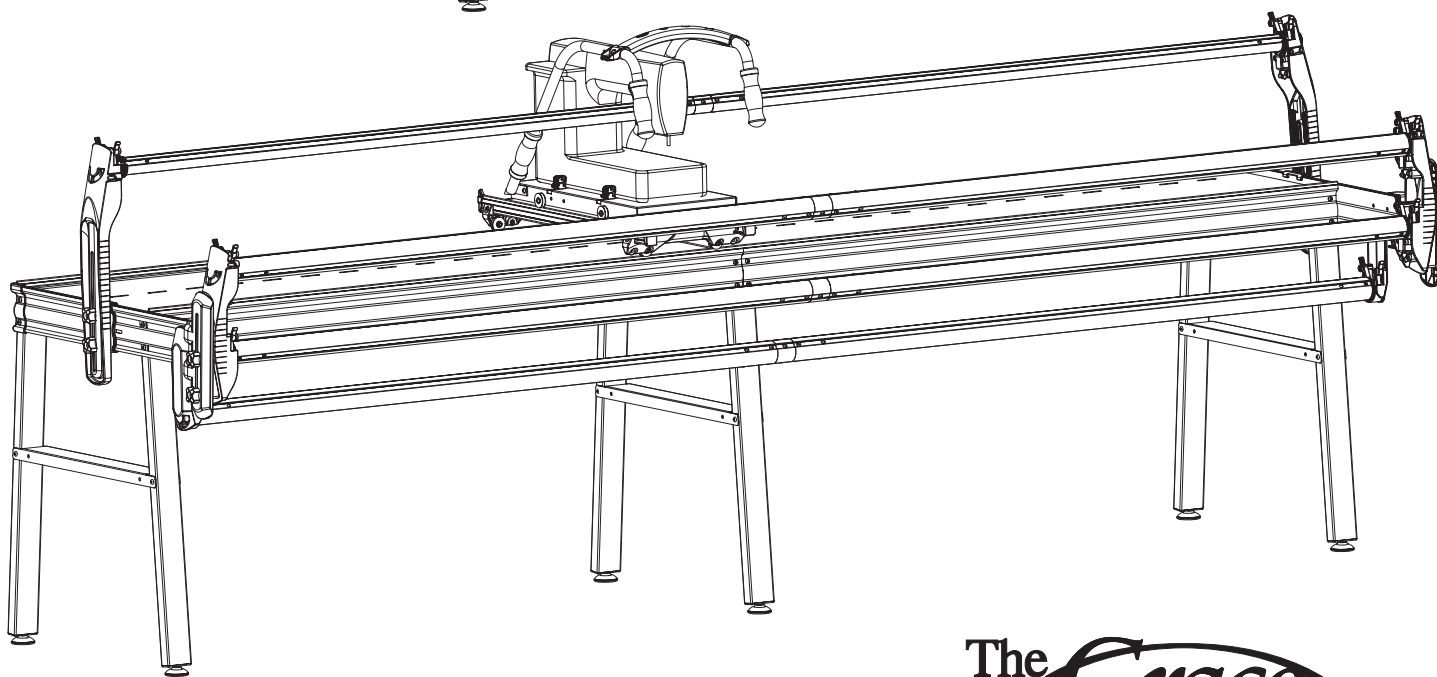
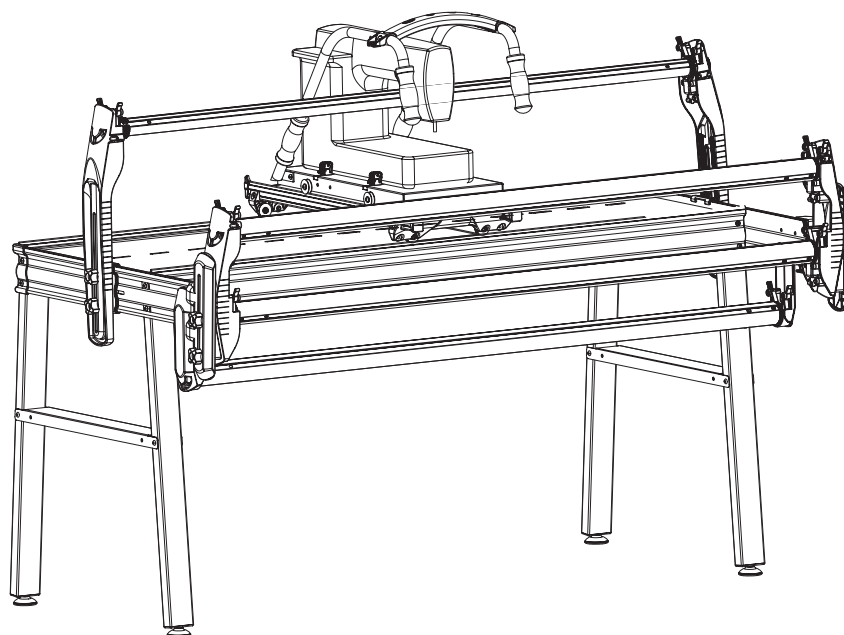


# The Pinnacle Quilting Frame



The *Grace*  
*Company*  
Fine Quilting Frames

Copyright May 2007  
Jim M. Bagley, GraceWood, Inc  
(Reproduction Prohibited)  
Print Date 5-16-07

# The Pinnacle Quilting Frame

## By The Grace Company

### Part List

|                                           |   |
|-------------------------------------------|---|
| Parts List A .....                        | 3 |
| Parts List B and Hardware Parts List..... | 4 |
| Manufacturer info.....                    | 5 |

### Assembly Steps

|                                                |    |
|------------------------------------------------|----|
| Step 1: Outer Leg Sub-assembly .....           | 6  |
| Step 2: Middle Leg Assembly .....              | 6  |
| Step 3: Frame End Sub-Assembly.....            | 6  |
| Step 4: Frame Assembly.....                    | 7  |
| Step 5: Table Surface Attachment.....          | 8  |
| Step 6: Track Attachment.....                  | 8  |
| Step 7: Frame End Assembly.....                | 8  |
| Step 8: Rail Assembly.....                     | 9  |
| Step 9: Rail Attachment to Table Assembly..... | 9  |
| Step 10: Top Plate Assembly.....               | 9  |
| Step 11: Bottom Plate Assembly.....            | 10 |
| Step 12: Bottom Plate Placement.....           | 10 |
| Step 13: Top Plate Placement.....              | 11 |
| Step 14: Sewing Machine Placement.....         | 11 |
| Step 15: Leveling the Table.....               | 11 |
| Step 16: Crib Table Assembly.....              | 12 |
| Step 17: Crib Table Surface Attachment.....    | 12 |
| Step 18: Crib Track Attachment.....            | 12 |

|                                                   |           |
|---------------------------------------------------|-----------|
| <b>Fabric Installation.....</b>                   | <b>13</b> |
| Step 1: Quilt Batting to Batting Rail .....       | 13        |
| Step 2: Quilt Top to the Quilt Top Rail.....      | 14        |
| Step 3: Backing to Backing Rail .....             | 14        |
| Step 4: Attach Quilt Layers to Take-Up Rail ..... | 14        |
| <b>Rolling Fabric.....</b>                        | <b>15</b> |
| <b>Making Cloth Leaders.....</b>                  | <b>16</b> |
| <b>Bungee Clamp Installation.....</b>             | <b>16</b> |
| <b>Speed Control.....</b>                         | <b>17</b> |
| <b>Sewing Tips.....</b>                           | <b>18</b> |

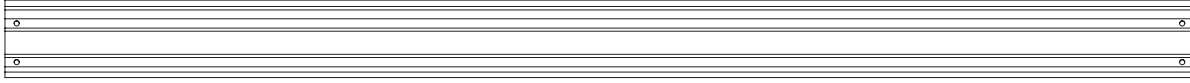
# Parts List A



(6) 2" Aluminum Rail



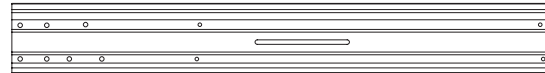
(2) 1.5" Aluminum Rail



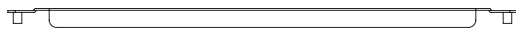
(4) Track Support



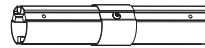
(1) Left Frame End



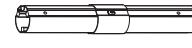
(1) Right Frame End



(6) Table Support



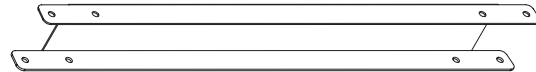
(3) 2" Rail Coupler



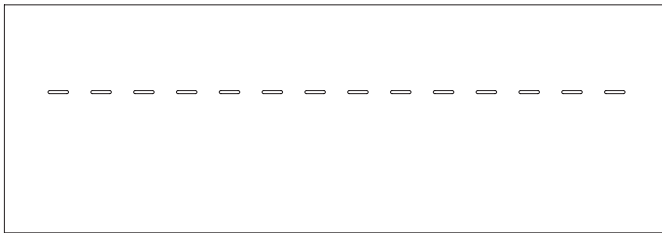
(1) 1.5" Rail Coupler



(4) Top Leg Brace



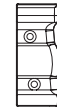
(3) Middle Leg Brace



(2) Table Surface



(1) Left Frame Corner



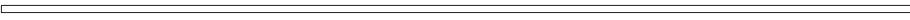
(1) Right Frame Corner



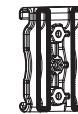
(2) 60" Plastic Track



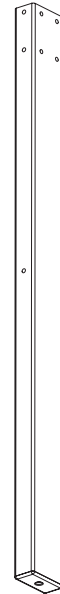
(2) 120" Plastic Track



(4) Fabri-fast Tubing



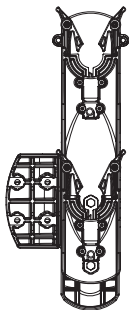
(2) Take-Up Rail Fixture



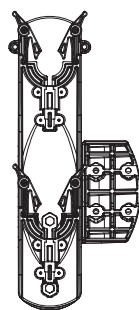
(6) Leg



(6) Leveling Foot



(1) Right Front Rail Mount End  
Pre-Installed (1) Fixture



(1) Left Front Rail Mount End  
Pre-Installed (1) Fixture



(2) 4th Rail Mount End



(1) Left Take-Up Rail Mount End

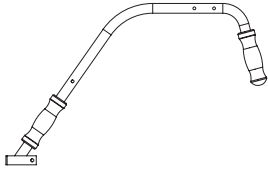


(1) Right Take-Up Rail Mount End



(8) Ratchet Wheel

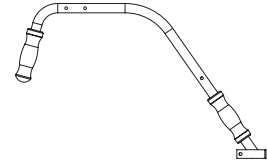
# Parts List B



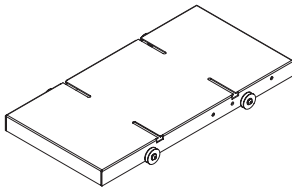
(1) Handle Tube Right  
Pre-Installed (2) Grip Foam



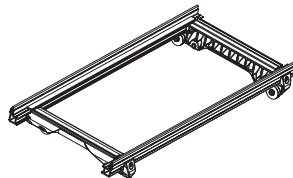
(1) Handle Brace



(1) Handle Tube Left  
Pre-Installed (2) Grip Foam



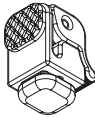
(1) Top Plate  
Pre-Installed (4) Wheels



(1) Bottom Plate  
Pre-Installed (4) Wheels



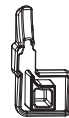
(1) Bottom Plate Platform



(4) Sewing Machine  
Clamp Assembly



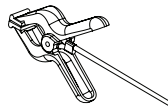
(2) Bottom Plate Extrusion  
End Cap A



(2) Bottom Plate Extrusion  
End Cap B



(1) Fabri-Fast Tool



(4) Bungee Clamp



(1) Speed Control Assembly

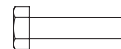
## Hardware List



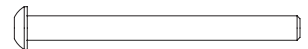
(66) 6mm X 10mm SHBC  
(Socket Head Button Screw)



(4) 6mm X 12mm SHBC  
(Socket Head Button Screw)



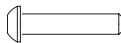
(6) 6mm X 35mm Hex Screw



(2) 6mm X 40mm SHBC  
(Socket Head Button Screw)



(62) 5mm X 10mm SHBC  
(Socket Head Button Screw)



(26) 5mm X 16mm SHBC  
(Socket Head Button Screw)



(6) 6mm Hex Nut



(6) Plastic Knob

### Tools Needed:

Open end wrench (Provided)  
3mm, and 4mm Allen wrenches (Provided)  
Fabri-Fast Tool (to be used when installing your fabric)

# Grace Quilting Frames and Hoops



## Innovation and Evolution

*Grace Quilting Systems have been developed over the past two decades with several original design innovations. Additionally, because of feedback from many of the thousands of quilters who have purchased and use our machine quilting systems, we have been able to make a frame that will truly enhance the entire process of machine quilting from beginning to end.*

### WELCOME!

As you begin assembly of your new Aluminum Frame home machine quilting system, keep in the 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.

## Step 1: Outer Leg Sub-Assembly

### Parts Needed:

- 4- Legs
- 4- Leveling Feet
- 2- Top Leg Braces
- 2- Middle Leg Braces
- 16- 6mm X 10mm SBHC Screws

### Tools Required:

- 4mm Allen Wrench (Provided)

1-1: Screw a Leveling Foot into the bottom of each of the legs as shown in Fig (1-1).

1-2: Lay the two Leg Assemblies down to simplify this step. Make sure the four holes at the top of the legs are to the outside and secure the Middle Leg Brace on the middle of the leg with four (4) 6mmX10mm SBHC Screws.

1-3: Secure the Top Leg Brace on the top of the leg with four (4) 6mm X10mm SBHC Screws. Tighten the 6mm X 10mm SBHC Screws using the 4mm Allen Wrench to secure them in place.

1-4: Repeat the first three steps to complete a total of two Outer Leg Sub-Assemblies as shown in Fig (1-2).

Fig (1-1)

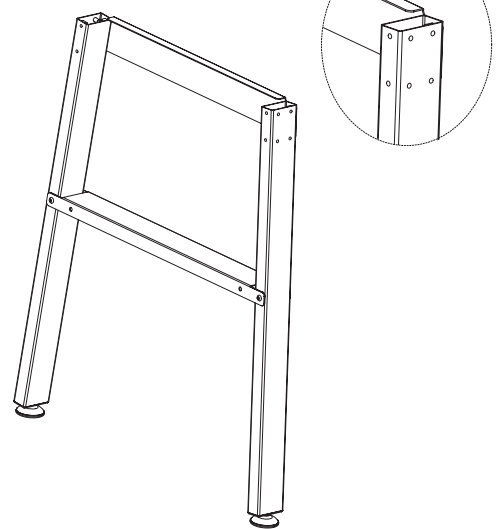


Fig (1-2)

## Step 2: Middle Leg Assembly (King Only)

### Parts Needed:

- 2- Legs
- 2- Leveling Feet
- 2- Top Leg Braces
- 1- Middle Leg Brace
- 12- 6mm X 10mm SBHC Screws

### Tools Required:

- 4mm Allen Wrench (Provided)

2-1: Repeat the first two steps of Outer Leg Sub-Assembly as shown in Fig (1-2).

2-2: Secure the two Top Leg Braces on the top of the leg with four (4) 6mmX10mm SBHC Screws. Make sure the two folds on the Top Leg Braces are to the inside as shown in fig (2-1).

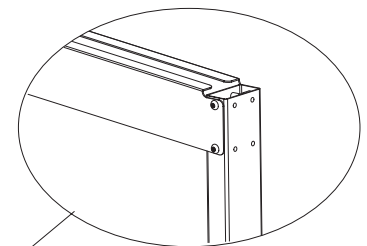
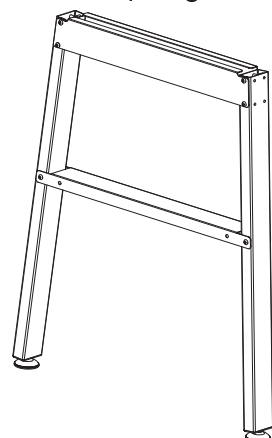


Fig (2-1)

## Step 3: Frame End Sub-Assembly

### Parts Needed:

- 2- Take-Up Rail Fixtures
- 2- Track Support Extrusions
- 2- Plastic Knobs
- 6- 6mm X 35mm Hex Screws



3-1: Put the two (2) 6mm X 35mm Hex screws into the Take-Up Rail Fixture as shown in Fig (3-1). Make sure the socket heads are seated into the countersinks on the Take-Up Rail Fixture.

3-2: Slide the Take-Up Rail Fixture down to the middle of the slot of the Track Support Extrusion as shown in Fig (3-2).

3-3: Slide an additional 6mm X 35mm Hex Screw into the Take-Up Rail Fixture as shown in Fig (3-3) and secure with the Plastic Knob.

3-4: Repeat step (3-1) to (3-3) to complete the other Frame End.

#### **Step 4: Frame Assembly (King Size), turn to Step 16 to assemble your frame in crib size**

Parts Needed:

- 2- Outer Leg Assemblies
- 1- Middle Leg Assembly
- 4- Track Supports
- 1- Right Frame End Sub-Assembly
- 1- Left Frame End Sub-Assembly
- 20- 6mm X 10mm SBHC Screws
- 4- 6mm X 12mm SBHC Screws

Tools Required:

- 4mm Allen Wrench
- Open End Wrench

**We recommend having someone hold up one end of the track support to help you with this step.**

4-1: Secure one end of the Track Support to the Outer Leg Assembly and the other end to the Middle Leg Assembly with four (4) 6mm X 10mm SBHC Screws with the 4mm Allen Wrench. Make sure you attach the Track Support to the two Outer Leg Sub-Assemblies, so that the Upper Brace is to the inside as indicated in Fig (4-1).

4-2: Repeat the first step to assemble the other side of Frame.

4-3: Attach the Left Frame Corner to the Left Frame End as shown in Fig (4-2); Use two (2) 6mm X 12mm SBHC Screws through the Left Frame Corner and the Left Frame End into the Frame Assembly. Tighten the 6mm X 12mm SBHC Screws with the 4mm Allen Wrench.

4-4: Use two (2) 6mm X 10mm SBHC Screws to attach the front of the Left Frame End to the Frame Assembly. Tighten the 6mm X 10mm SBHC Screws with the 4mm Allen Wrench.

4-5: Repeat 4-3 and 4-4 to complete the Right Frame End.

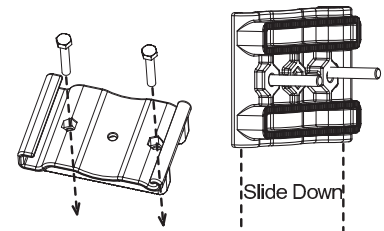


Fig (3-1)

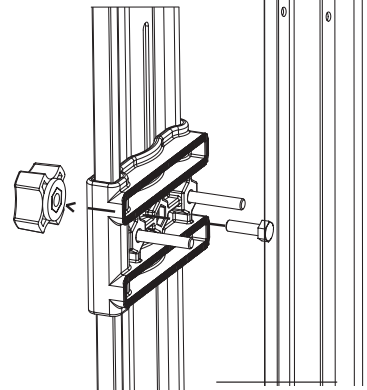


Fig (3-2)

Fig (3-3)

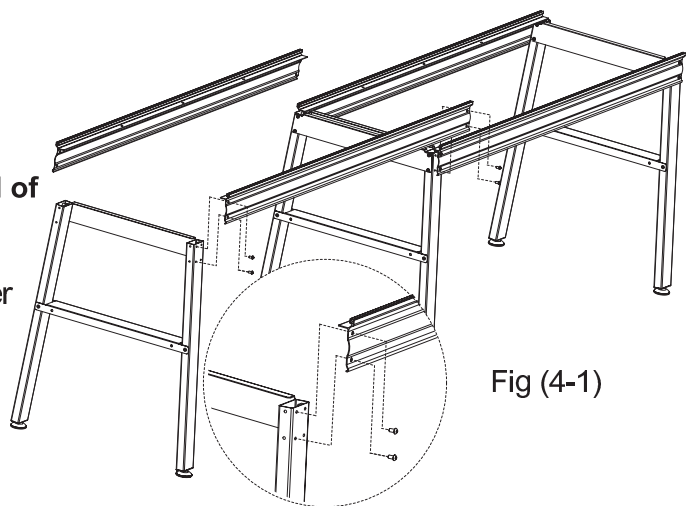


Fig (4-1)

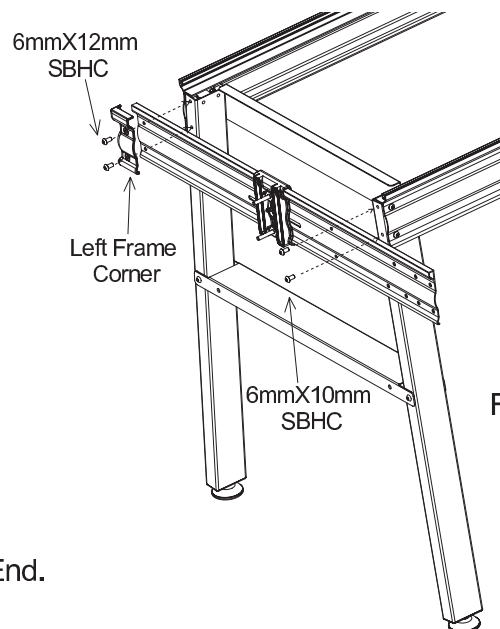


Fig (4-2)

## Step 5: Table Surface Attachment

Parts Needed:

- 6- Table Supports
- 2- Table Surfaces
- 12- 5mmX10mm SBHC Screws

**Note:** (The slots cut in the Table Surface are closer to the back of the Table Assembly.) The slots are in the table to attach the Pattern Perfect, and other optional accessories.

5-1: Attach all six (6) Table Supports to the Track Support with the 5mm X 10mm SBHC Screws. The Table Braces are attached to the bottom side of the Track Support flange with the Tape on the Table Brace facing up.

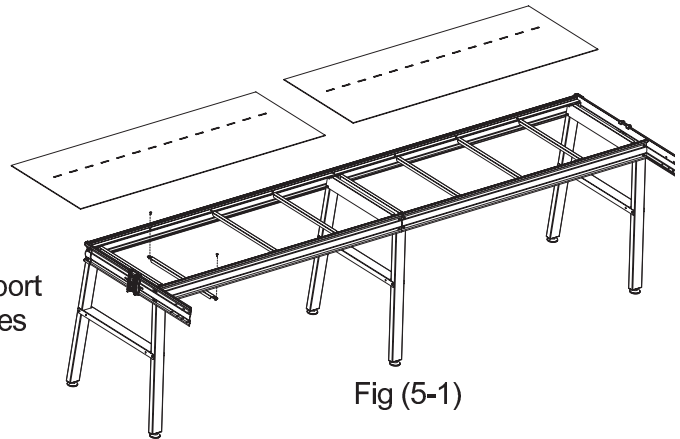


Fig (5-1)

5-2: Remove the backing from the Tape in one foot sections, starting at one end of the Frame. Line up the plastic Table Surface with the Top Leg Brace, and press firmly in place before removing the next one (1) foot section of Tape Backing. Make sure the textured side is facing up. Repeat this process until the entire Table Surface is attached.

## Step 6: Track Attachment

Parts Needed:

- 2- 120" Plastic Tracks

6-1: Snap the 120" Plastic Track into the Track Supports on the Front, and also the back of the Table assembly as shown in Fig (6-1). Start on one end of the Frame, and work your way down as the Track snaps into place. (You May need to lightly tap the Track to get it in place.)  
**Note:** To remove the track, start at one end and pry the track out with a small screw driver and then pull it out the rest of the way.

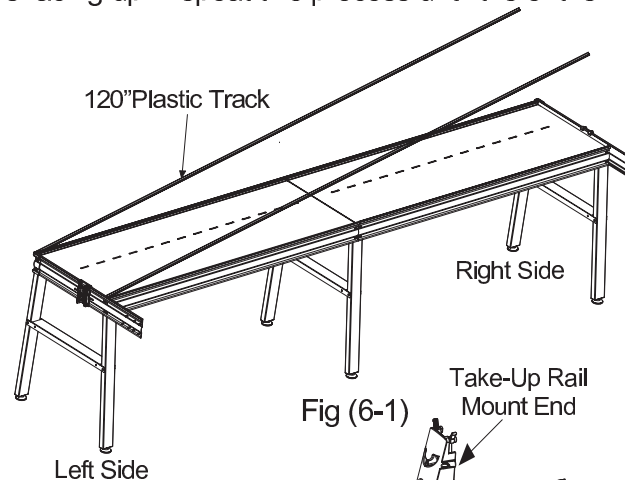


Fig (6-1)

## Step 7: Frame End Assembly

Parts Needed:

- 1- Left Take-Up Rail Mount End
- 1- Right Take-Up Rail Mount End
- 2- 4th Rail Mount Ends
- 1- Right Front Rail Mount End
- 1- Left Front Rail Mount End
- 14- 6mm X 10 mm SBHC Screws
- 4- Plastic Knobs

7-1: Attach the Right & Left Take-Up Rail Mount Ends to each of the Take-Up Fixtures with a plastic knob. As shown in Fig (7-1).

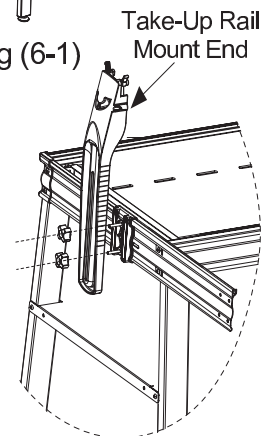


Fig (7-1)

7-2: Remove the pre-installed screws and secure the 4th Rail Mount End to each side of the Frame End Sub-Assemblies by tightening three (3) 6mmX10mm SBHC Screws with the 4mm Allen Wrench as shown in Fig (7-2).

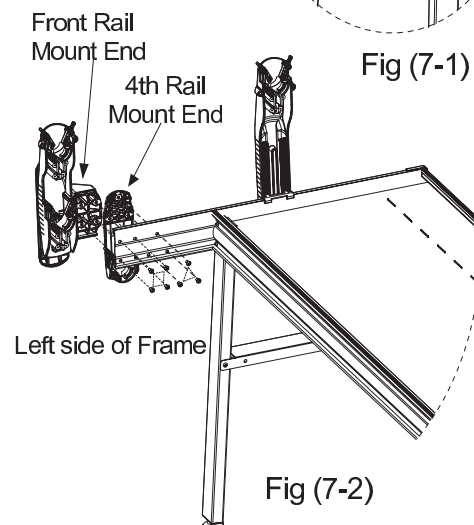


Fig (7-2)

7-3: Remove the pre-installed screws and secure the Right & Left Front Rail Mount Ends to each of the Frame End Sub-Assemblies by tightening four (4) 6mmX10mm SBHC Screws with the 4mm Allen Wrench as shown in Fig (7-2).



## Step 8: Rail Assembly

### Parts Needed:

- 3- 2" Rail Coupler
- 1- 1.5" Rail Coupler
- 6- 2" Aluminum Rails
- 2- 1.5" Aluminum Rails
- 8- Ratchet Wheels
- 48- 5mm X 10mm SBHC Screws
- 24- 5mm X 16mm SBHC Screws

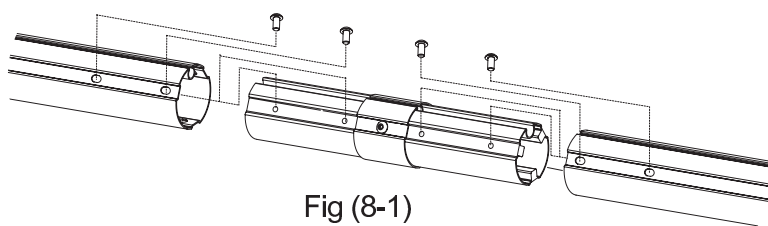


Fig (8-1)

8-1: Join the two 1.5" Rails to the 1.5" Rail Coupler using twelve (12) 5mm X 10mm SBHC Screws as shown in Fig (8-1). Tighten the 5mm Screws with a 3mm Allen Wrench.

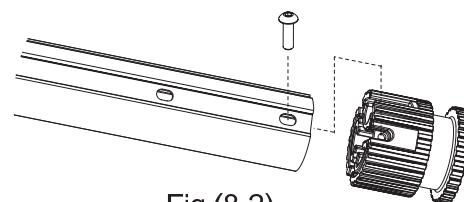


Fig (8-2)

8-2: Attach a Ratchet Wheel to one end of the assembled rail with a 5mm X 16mm SBHC Screw, as Show in Fig (8-2). ( Slide the Ratchet Wheel onto the Rail until you can see the entire hole in the nut). Repeat this for all three (3) sides of the Ratchet Wheel on both ends of the rail.

8-3: Repeat the first two steps with the remaining 2" Rails and Rail Couplers. The Ratchet Wheel will slide into the 2" rail rather than over the rail as with the 1.5" rail.

## Step 9: Rail Attachment to Table Assembly

### Parts Needed:

- 3- 2" Rail Assemblies
- 1- 1.5" Rail Assembly

**WARNING: The Rail End may become damaged if the Rail is allowed to sag down while one end is attached to the Take-Up Rail Mount End, Front Rail Mount End, or the 4th Rail Mount End.**

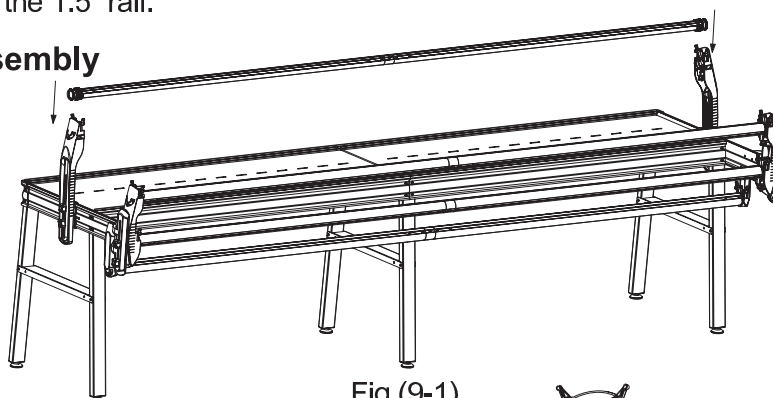


Fig (9-1)

9-1: Slide one of the Ratchet Wheels of the 1.5" Rail Assembly into the wide slots in the Right Take-Up Rail Mount End and snap it into place past the ratchet keeps. As shown in Fig(9-1).

9-2: Slide the Ratchet Wheel on the other side of the 1.5" Rail Assembly into the wide slots in the Left Take-Up Rail Mount and snap it into place. The rail should now turn freely.

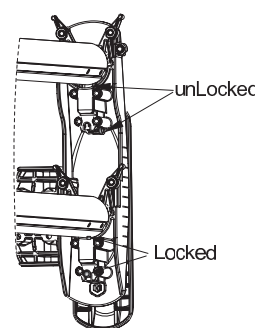


Fig (9-2)

9-3: Repeat Steps 9-1, and 9-2 to attach the remaining three (3) 2" Rail Assemblies to the 4th Rail Mount End and Front Rail Mount End.

## Step 10: Top Plate Assembly

### Parts Needed:

- 1- Top Plate
- 1- Handle Brace
- 1- Right Handle Tube
- 1- Left Handle Tube
- 4- 6mm X 10 mm SBHS Screws
- 6- 6mm Hex Nuts
- 2- 6mm X 40mm SBHS Screws

### Tools Required:

- 4mm Allen Wrench

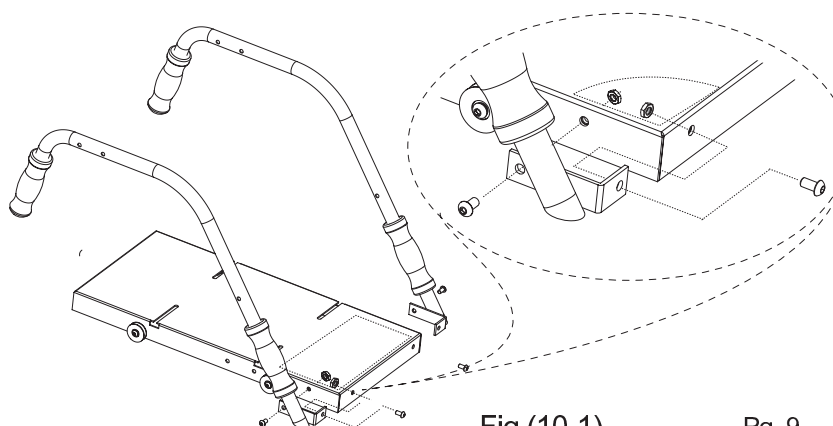


Fig (10-1)

10-1: Attach the Right Handle Tube to the right back corner of the Top Plate with two (2) 6mm X 10mm SBHC Screw, as shown in Fig (10-1).

10-2: Attach the Left Handle Tube to the left back corner of the Top Plate with two (2) 6mm X 10mm SBHC Screws as shown in Fig (10-1).

10-3: Attach the Handle Brace onto both the Right & Left Handle Tubes with two (2) 6mm X 40mm SBHS as shown in Fig (10-2).

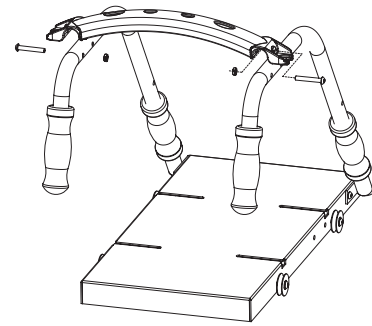


Fig (10-2)

## Step 11: Bottom Plate Assembly

Parts Needed:

- 1- Bottom Plate
- 1- Bottom Plate Platform
- 2- Bottom Plate Extrusion End Cap A's
- 2- Bottom Plate Extrusion End Cap B's

11-1: Push two Bottom Plate Extrusion End Cap A's into opposite corners of the Bottom Plate. Make sure both End Cap A's slide into the slots on the Bottom Plate Extrusions as shown in Fig (11-1).

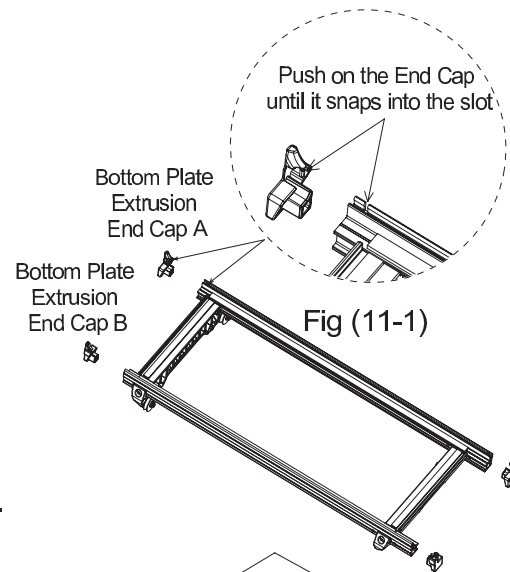


Fig (11-1)

11-2: Push two Bottom Plate Extrusion End Cap B's into the remaining two corners of the Bottom Plate. Make sure both End Cap B's slide into the slots on the Bottom Plate Extrusions.

11-3: Remove the backing from the Double Sided Tape that is attached to the Bottom Plate.

11-4: Apply the Bottom Plate Platform to the Bottom Plate with the textured side up. Press the edges firmly into place until the platform has adhered completely into place, as shown in Fig (11-2).

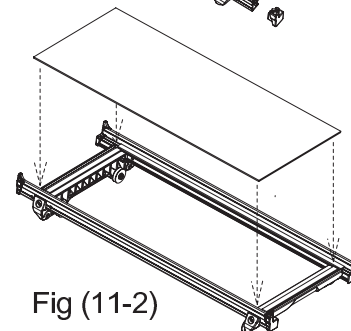


Fig (11-2)

## Step 12: Bottom Plate Placement

Parts Needed:

- 1- Bottom Plate Assembly
- 1- Table Assembly - Complete

12-1: First, remove the Take-Up Rail from the Table Assembly. This is the Rail located over the middle of the table.

12-2: Place the Bottom Plate Assembly on the Table Assembly and make sure that all four wheels on the Bottom Plate are in contact with the Plastic Track. The Bottom Plate should roll smoothly on the Track.

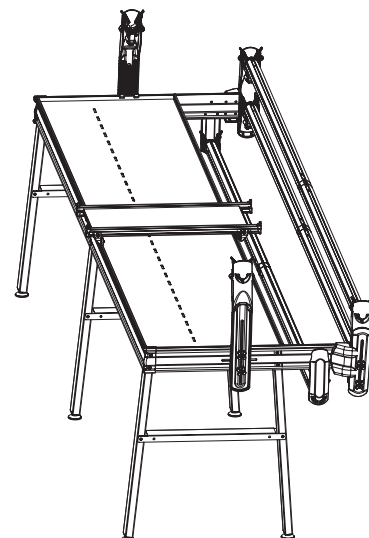


Fig (12-1)

### Step 13: Top Plate Placement

Parts Needed:

- 1- Bottom Plate Assembly
- 1- Table Assembly - Complete with Bottom Plate

13-1: Place the Top Plate Assembly onto the Bottom Plate, as shown in Fig (13-1). Make sure all four wheels are on the track, located on the top side of the bottom plate, and that the Top Plate rolls smoothly.

**NOTE:** The Completely assembled Top Plate, with the Bottom Plate will be referred to as the Carriage throughout the remaining text, except when the instructions refer to features only on one item or the other.

### Step 14: Sewing Machine Placement

Parts Needed:

- 1- Sewing Machine (Your Sewing Machine)
- 4- Sewing Machine Clamp
- 1- Table Assembly - Complete with Carriage

14-1: Place your Sewing Machine onto the Top Plate of the Carriage, and center it, both from side to side, as well as from front to back. As shown in Fig (14-2)

14-2: Pull the Cam Clamp Handle in the Open Position as shown in Fig(14-1); slide it into the slot as shown in Fig(14-2), Push the handle down to the lock the Clamp into position when it touches the Sewing Machine. Repeat this with the remaining three clamps.

14-3: Roll the Carriage all the way to one end of the Table.

14-4: Now, put the Take-Up Rail through the open area of the throat of your Sewing Machine. Attach the Take-Up Rail as previously shown in the Step 9.

### Step 15: Leveling the Table

Now that you have completed the assembly of your Quilting Frame, adjust the Table so that it is Level.

15-1: Adjust the Leveling Feet by screwing them in further to lower the table or unscrewing them to raise the table. The Carriage should not roll from side to side, or from front to back when it is left at any point on the table.

Congratulations! This completes your Quilting Frame Setup. Please make sure that all screws are completely tightened before continuing. Now you need to install your quilt fabric to the Quilting Frame. Detailed instructions explaining how to put your fabric onto the frame are located on Pg.13.

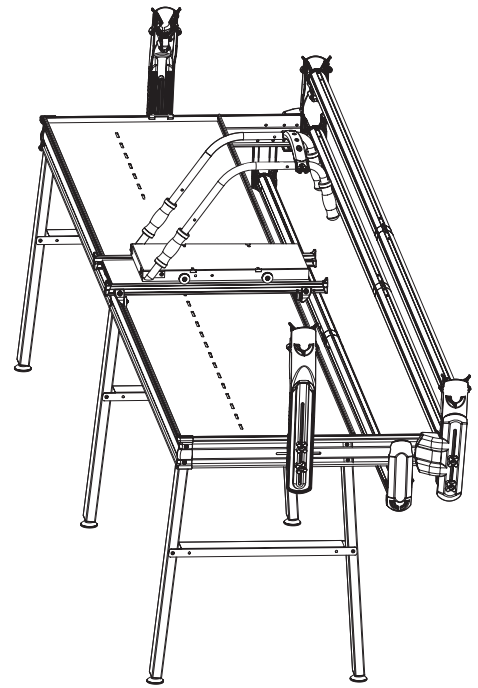


Fig (13-1)

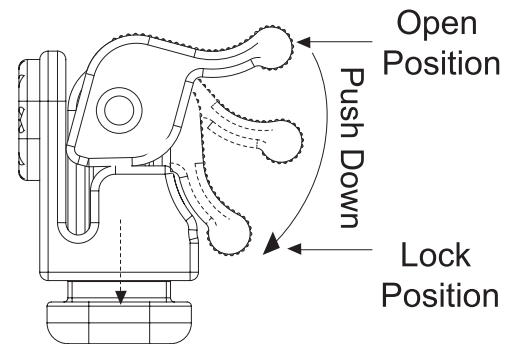


Fig (14-1)

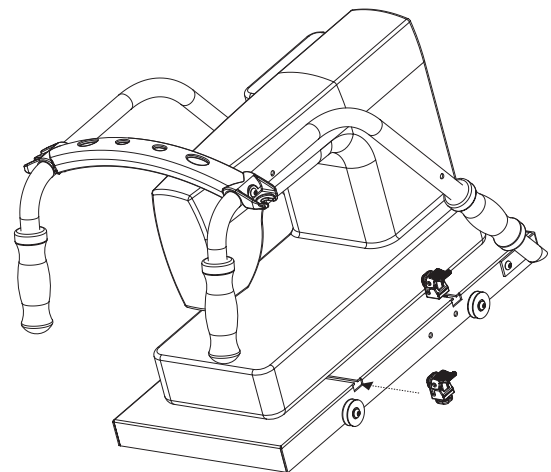


Fig (14-2)

## Step 16: Crib Table Assembly

### Parts Needed:

- 2- Outer Leg Assemblies
- 2- Track Supports
- 1- Right Frame End Sub-Assembly
- 1- Left Frame End Sub-Assembly
- 12- 6mm X 10mm SBHC Screws
- 4- 6mm X 12mm SBHC Screws

### Tools Required:

- 4mm Allen Wrench
- Open End Wrench

**NOTE:** The maximum width for a quilt made in the Crib Configuration is 50" we recommended that you build your Quilting Frame full size.

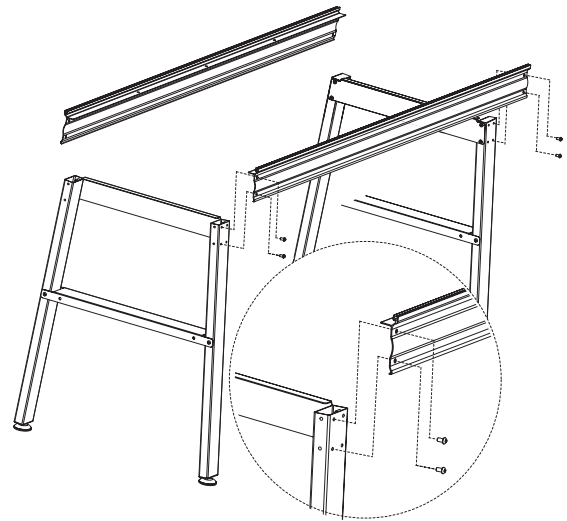


Fig (16-1)

16-1: Please use the same method used in Step 4 to finish Crib Frame assembly as shown in Fig (16-1).

## Step 17: Crib Table Surface Attachment

### Parts Needed:

- 3- Table Braces
- 1- Table Surface
- 6- 5mm X 10mm SBHC Screws

17-1: Please use the same method used in Step 5 to finish Crib Table Surface Attachment as shown in Fig (17-1).

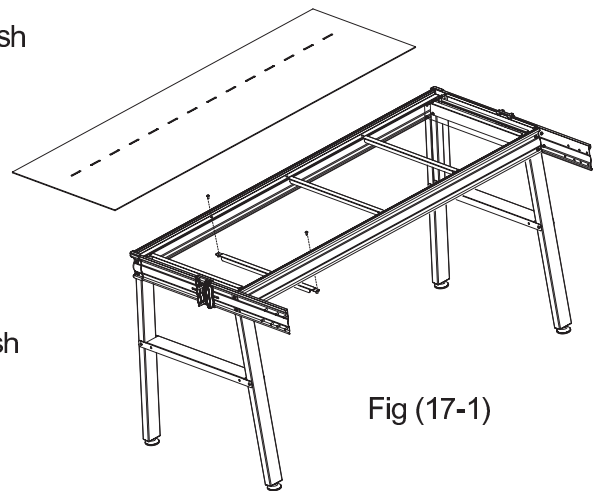


Fig (17-1)

## Step 18: Crib Track Attachment

### Parts Needed:

- 2- 60" Plastic Tracks

18-1: Please use the same method used in Step 6 to finish Crib Track Attachment as shown in Fig (18-1).

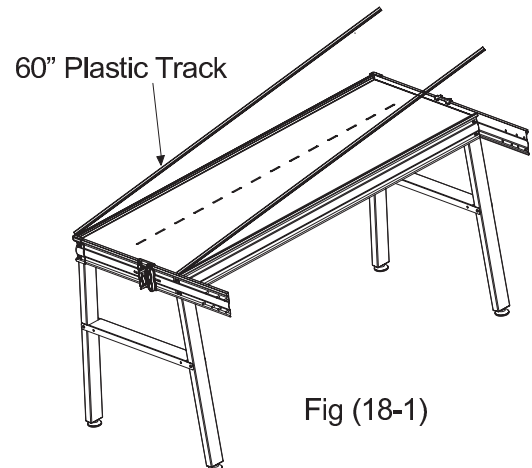


Fig (18-1)

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

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

With the Grace - specially designed Fabri-Fast rails, installing your fabric is easier on the Grace Quilting Frames than on any other frame. Each rail has a Fabri-Fast slot and accompanying tubing. These components work together to make your fabric installation much easier and faster than using tape, tracks 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 12" longer and 2-4" wider than your top. This will allow for a little give in the backing, especially if using thicker batting.

### Fabric Installation

**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 (you should cut the tubing to 56 inches if you have set your frame up in the crib size), and holding your fabric over 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 tubing 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** (instructions on Pg. 16)

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

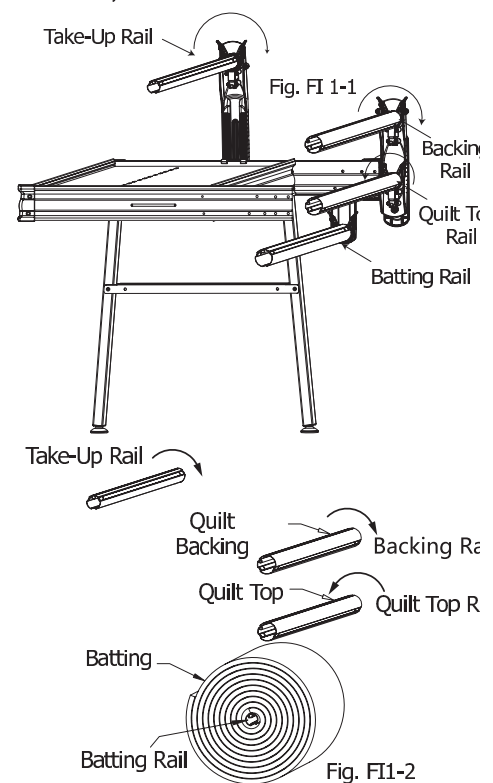
- Step 1: Install Batting to Batting Rail and roll up.
- Step 2: Install Quilt Top to the Quilt Top Rail and roll up.
- Step 3: Install Backing to Backing Rail and roll up.
- Step 4: Attach Quilt Layers to Take-Up Rail.

#### 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 doesn't matter. The important thing to watch when rolling the batting is that the batting is not stretched. Always keep the ratchet lever on the batting rail in the Neutral Position (Right or Left Side) to prevent any tension from being applied to the batting (See Fig.FI 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.

2-3: Make sure that the Quilt Top Rail's Ratchet Lever is in the center ratcheting position and ratchets as it rolls. This will ensure you roll the fabric in the correct direction. 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.

## Step 3: Quilt backing to Backing Rail

3-1: To begin, determine which will be the front and back edge of your quilt backing. (Your quilt can't exceed (110" wide) the maximum quilt width of your Quilting Frame. Your quilt's length is only limited by the size of the throat of your sewing machine.)

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 backing 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: Make sure that the Backing Rail's Ratchet Lever is in the center ratcheting position and ratchets as it rolls. This will ensure you roll the fabric in the correct direction. Roll your backing onto the Backing Rail (See Fig FI 1-1) 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.

## Step 4: Attaching Quilt Layers to the Take-Up Rail (See Fig. FI4-4).

4-1: Put the Take-Up Rail's Ratchet Lever into the center ratcheting position, to ensure that it always rotates in the correct direction.

4-2: Put the Backing Rail's Ratchet Lever into the side Neutral position. Now take the end of the quilt backing and attach it to the Take-Up

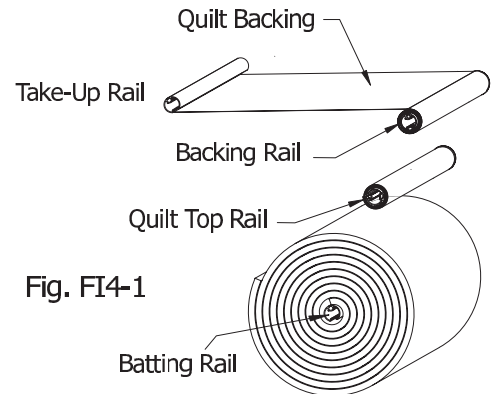


Fig. FI4-1

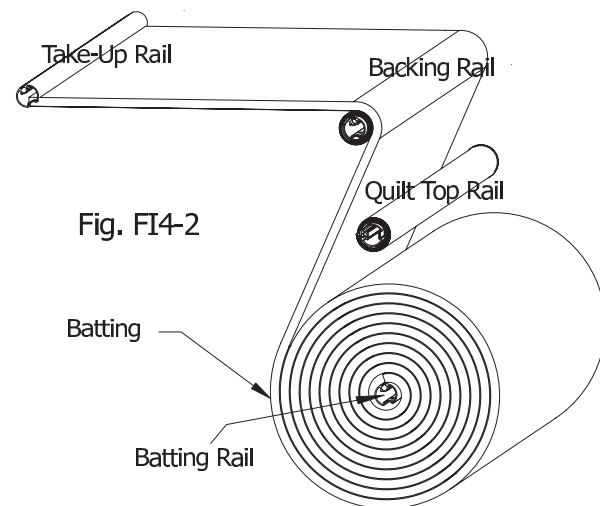


Fig. FI4-2

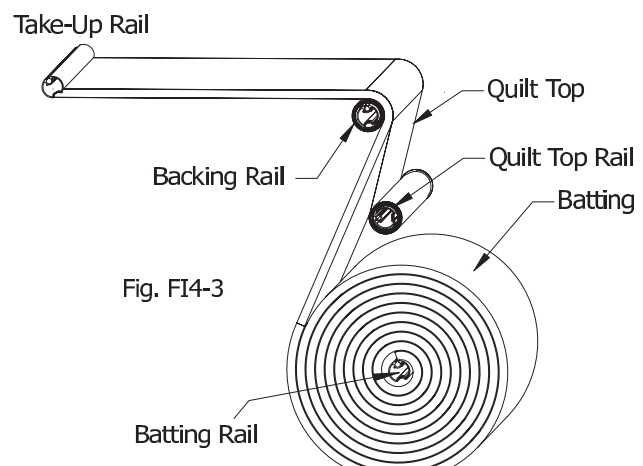


Fig. FI4-3



Rail with the fabri-fast tubing. Be careful to not stretch your fabric. Put the Ratchet Lever back into the center Ratcheting position, and roll the Backing Rail to apply just enough tension to the Backing fabric to keep the fabric flat. The fabric should be loose, but not sagging (See Fig. FI4-1).

4-3: Next, bring your Batting up in between the Quilt Top Rail and Backing Rail and drape it over the Backing. Lay it along the edge of the Take-Up Rail (See Fig. FI4-2).

4-4: Put the Quilt Top's Ratchet into the side Neutral Position. Now, 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 (See Fig. FI4-3). Put the Quilt Top's ratchet back into the Ratcheting Position. You are now ready to sew your desired patterns onto your quilt.

## Rolling your fabric

When you have completed quilting your work area and are ready to roll to the next, simply switch the Quilt Top, and Backing Ratchets into the neutral position, allowing them to roll freely. The Batting Ratchet should already be in the Neutral position. Roll the Take-Up Rail forward, rolling the sewn quilted area onto that rail. After you have advanced your quilt to the next location, switch each Rail's Ratchet Lever back to it's ratcheting position except the batting rail, 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 Mount End as needed, so that the bottom of the rolled 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 when quilting a large quilt with a small sewing machine or when using very thick batting.)

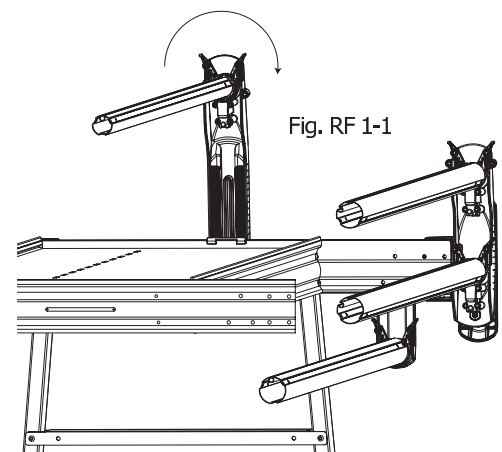
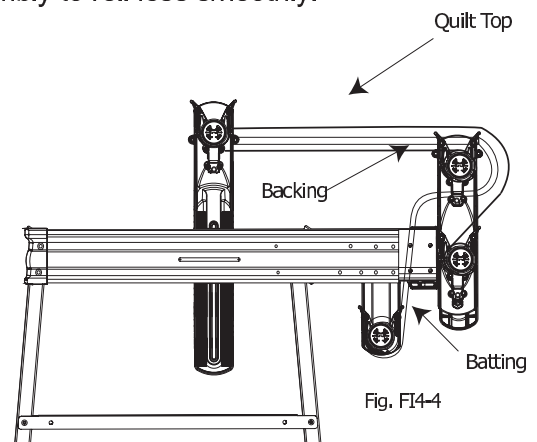
Step 1: Begin pin basting your quilt when the quilt rolled up onto the Take-Up Rail is larger than desired. Pin-baste all of the remaining un-quilted material.

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 Quilt Top 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 Front Rail Mount End where the Quilt Top Rail was located. Now put the other empty rail in the Take-Up Rail location, making it the New Take-Up Rail.

Step 5: Put the Backing Rail and the Quilt Top Rail Ratchet Levers in the side neutral position and pull the quilt up and over the Backing Rail and attach the quilt to the new Take-Up Rail, using the Fabri-Fast Tubing.



Step 6: Roll the quilt off of the new Quilt Top Rail, onto the New Take-Up Rail until it has reached the area of the quilt where you began basting.

Step 8: Place the Ratchet Lever on the Quilt Top Rail in the Center Ratcheting Position and roll the rail back to add a little tension to your fabric. You are now 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 by putting the Take-Up Rail's Ratchet Lever in the neutral position and rolling the Quilt Top Rail. Your finished quilt will now be rolled up onto the Quilt Top 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 to install into the rail slot.

2: Surge or hem your cloth leaders on all sides.

3: Make cloth leaders in the following widths:

Take-up Rail Leader – 4 inches

Backing Leader – 18 inches

Quilt Top Leader – 24 inches

The recommended length is 110". 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 ½" 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 a straight line. (OPTIONAL: For 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. 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).

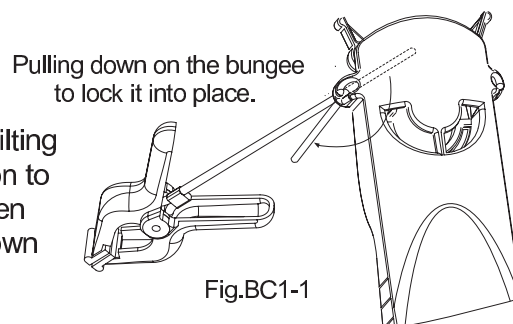
6: Mark (or baste) a straight line about ½" in from the opposite (non-hemed, or non-dashed) end of the leader. This will be the line to which you attach your fabric layer.

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 with the 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 four Bungee Clamps provided with your Pinnacle 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 as shown in Fig. BC1-1, pulling it down to lock it into place.

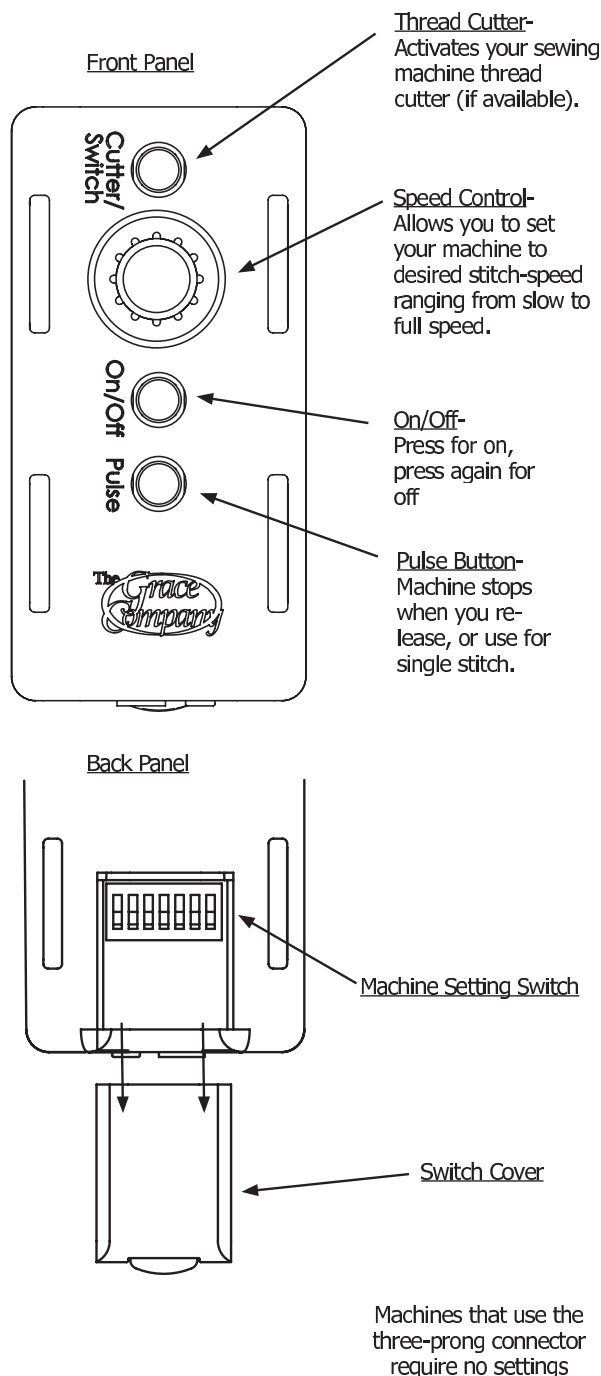
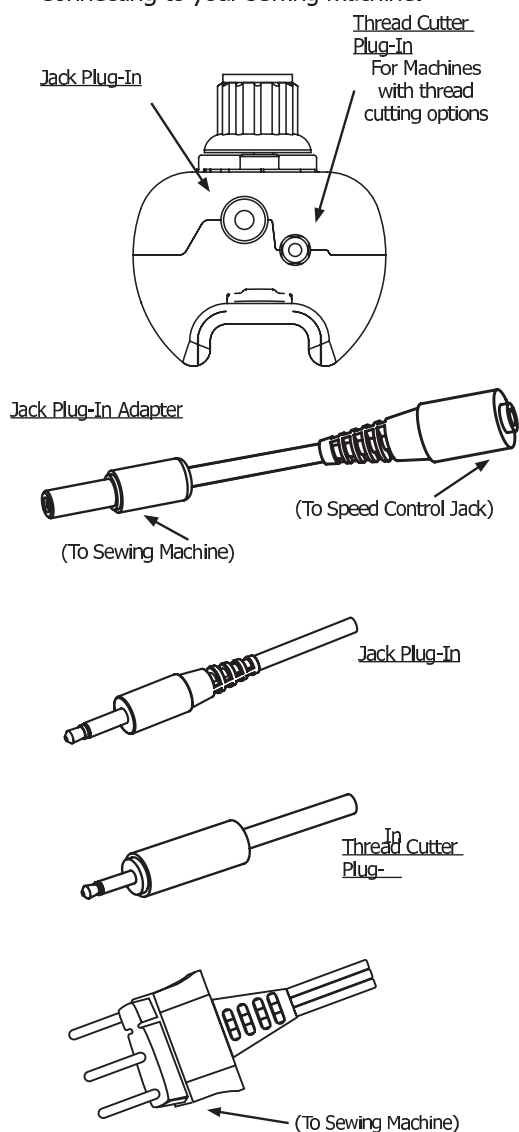




# Grace Speed Control

The Grace Speed Control is designed to work with many models of Sewing Machines

Connecting to your sewing machine:



For Technical Assistance  
please contact:

The Grace Company  
1-800-264-0644

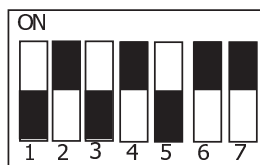
\*The Grace Speed Control Switch is compatible with most DC-powered machines. DC-powered machines usually have a separate foot pedal plug in and power cord plug in. \*

## Setting 1



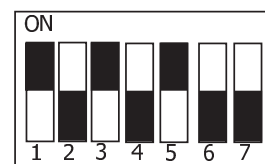
Juki / Singer  
black indicates switch position

## Setting 2



Baby Lock / Brother  
Janome / New Home  
black indicates switch position

## Setting 3



Bernina / Pfaff  
black indicates switch position

## Optional Accessories

There are many optional accessories available for your Aluminum Frame Quilting frame. Check with your local dealer or visit [www.graceframe.com](http://www.graceframe.com) to see all of the accessories available, as new items are being developed regularly.

## 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 large 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.
- Keeping the fabric on the Take-Up Rail just slightly above the bed of the sewing machine, yields the best results. If the fabric is too high off the bed, thread and needle breakage may occur. If it is pressing down on the bed of the machine it will be difficult to roll the sewing machine on the frame.
- 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 rails, check under the quilt to see that the back is smooth.