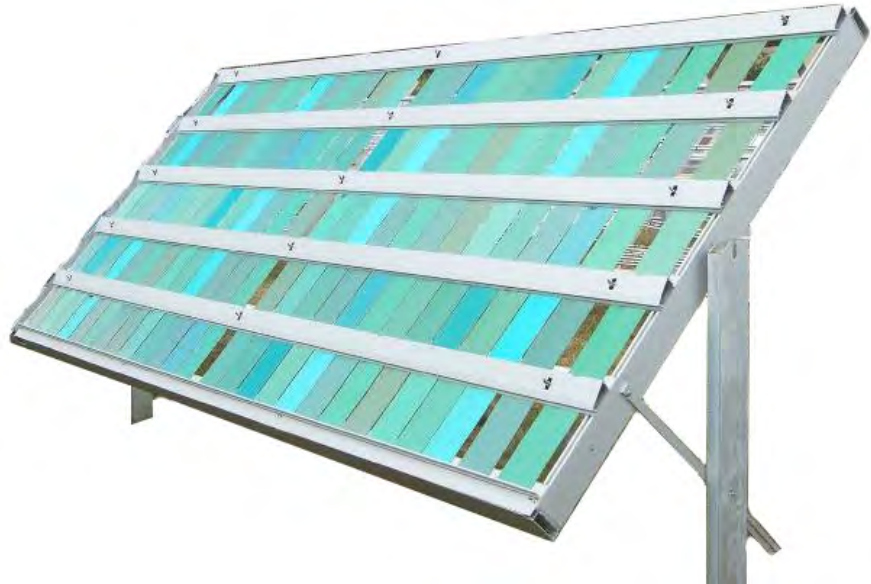

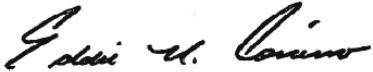
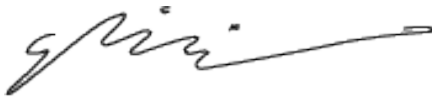


Q-RACK

Q-RACK Knock Down Exposure Rack Assembly and Installation



Applicable Models:	Q-RACK® Knock Down Exposure Rack
Applicable Serial Numbers:	None
Applicable Kit Numbers:	FL-3055-K

Written by	Repair Approval	Engineering Approval
		
Robert Novak	Eddie Corcino	Mike Simecek

Summary

These instructions describe the assembly and installation of the Q-Lab Q-RACK Knock Down Exposure Rack.

- The main components of FL-3055-K are:
 - > Knock Down Exposure Frame
 - > Legs
- The exposure frame must be assembled.
 - > A flat, clear area approximately 4 m x 2 m (12 ft x 6 ft) is recommended for laying out and assembling the frame.
- The plastic washers in the kit will be installed on the steel fasteners used to assemble the frame.
 - > The plastic washers separate the fasteners from the aluminum frame components to minimize the chance of corrosion.
- The legs support the exposure frame.
 - > The legs should be set in concrete prior to mounting the assembled exposure rack.
 - > Setting the legs requires digging and pouring concrete.
 - > Spacing of the legs is critical.
 - > See [Section 2](#) for detailed instructions for setting the legs.
 - > Follow all applicable building and construction requirements when installing the legs.
- To complete the installation of FL-3055-K, a rack positioning arm kit must be purchased separately.
 - > Three position arm kits are available: for 0-5 degrees from horizontal, 45 degrees from horizontal, and 90 degrees from horizontal rack positioning (see below).
 - > See [Section 4](#) for positioning arm installation details.

Part No.	Description
FL-3071-K	0° - 5° Position Arm Kit
FL-3032-K	45° Position Arm Kit
FL-3126-K	90° Position Arm Kit

Tools Required	
Adjustable Wrenches	Level
Medium Phillips Screwdriver	Tools for Digging and Pouring Concrete
Large Framing Square	

FL-3055-K Q-RACK Knock Down Exposure Rack Kit		
Part No.	Description	Quantity
FL-3057-X	Top and Bottom Rail	2
FL-3062-X	End Rail	2
FL-3063-X	Center Rail	2
FL-3064-X	Corner Support Assembly	4
U-40752	1/4-20 Hex Nut, 316 SS	24
U-40759	1/4" Spring Lock Washer, 316 SS	24
U-40760	5/8" Plastic UHMW Fender Washer	4
U-40765	1/4" Plastic UHMW Washer	48
U-5692	1/4-20 × 1-3/4 Hex Hd Cap Screw, 316 SS	24
U-5722	5/8"-11 Hex Nut, 316 SS	4
U-5762	5/8"-11 × 3-1/2" Hex Hd Cap Screw, 316 SS	2
U-5763	5/8" Flat Washer, 316 SS	4
FL-3072-X	Leg - Long	2
FL-3006-X*	Flap Complete	5
FL-3007-X*	Panel Holder Lower Flap	5
FL-3008-X*	Hinge Assembly	25
FL-3018*	Plastic Strip	5
U-5386*	5/32 × 0.362 SS Blind Rivet	25
U-41501	1/4-20 × 2.00" Phillips Pan Hd Screw, 316 SS	15
U-40752	1/4-20 Hex Nut, 316 SS	15
U-40753	1/4-20 Wing Nut, 316 SS	15
FL-3010	Sub Frame Channel Nut	24
U-5245	#10-24 × 1/2" Phillips Pan Hd Screw, 316 SS	24
FL-3070-X	Panel Base Complete	1

* These parts are assembled in the kit to provide a complete panel holder flap.

Contents

Section 1. Safety	4
Section 2. Set the Q-RACK Legs in Concrete	5
2.1 Suggested Leg Setting	5
2.2 Required Leg Spacing	6
Section 3. FL-3142-X Exposure Frame Assembly.....	7
3.1 Exposure Frame Parts List	7
3.2 Exposure Frame Assembly	8
3.3 Panel Holder Assembly.....	16
Section 4. Mount Exposure Frame on Legs.....	20
Section 5. Repair and Tester Support	24

Section 1. Safety

These instructions do not purport to address potential safety issues, if any, associated with the product's use. It is the responsibility of the user of these instructions to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

- Before attempting any of the following, observe the appropriate safety labeling shown in [Figure 1a](#) and [Figure 1b](#).



Figure 1a. Attention



Figure 1b. Two Person Lift

Section 2. Set the Q-RACK Legs in Concrete

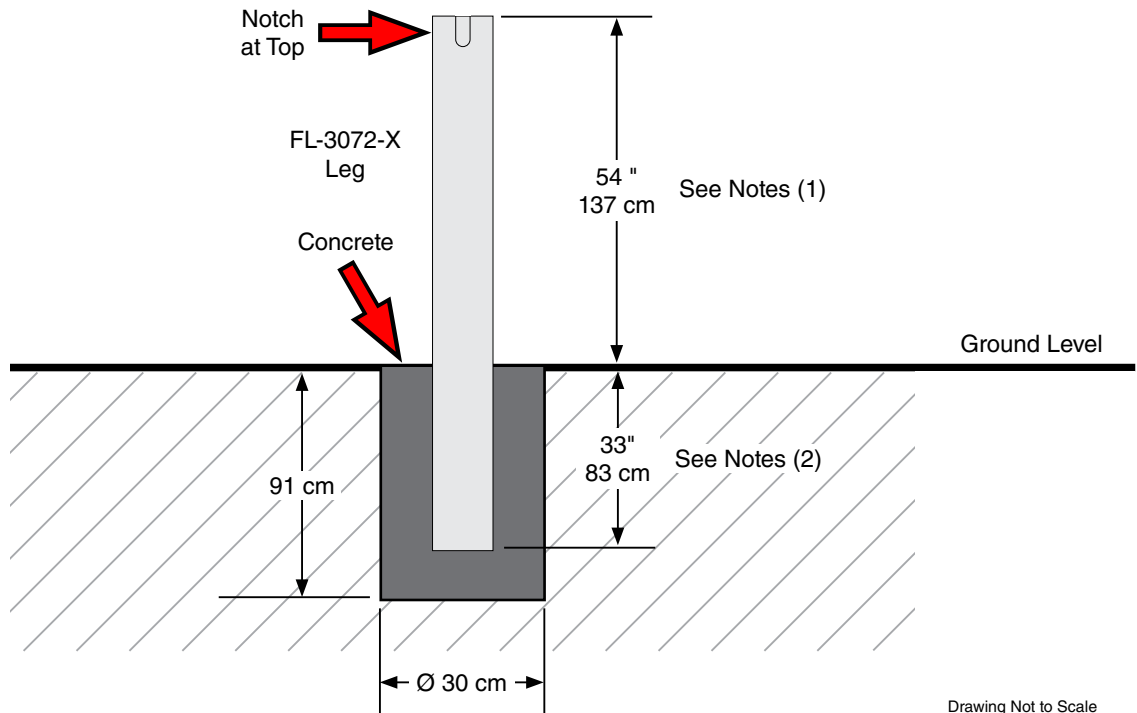
2.1 Suggested Leg Setting



Follow all local building codes, construction requirements and best practices when setting the rack legs.



Use a level to make sure leg is plumb.

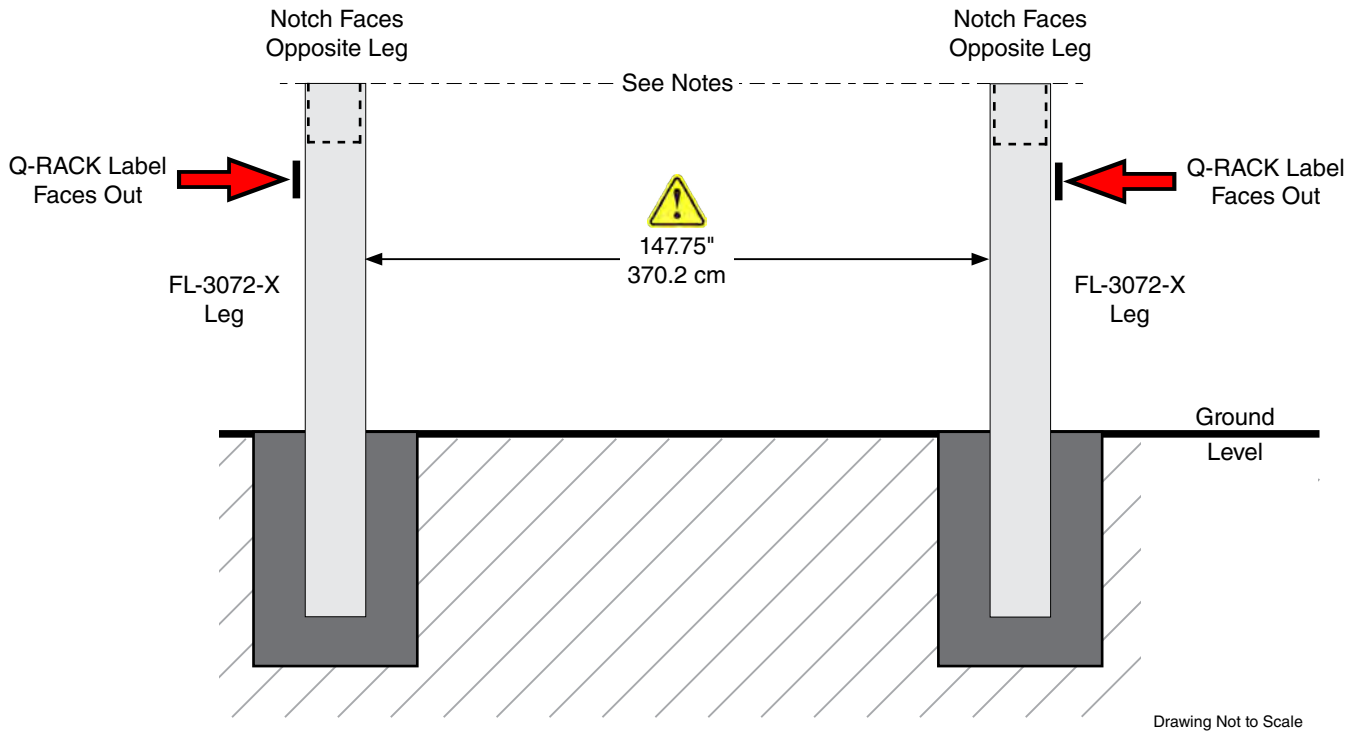



1. Set two (2) legs in concrete as shown. See [Step 2](#) for required leg spacing.

NOTES:

1. Legs should be at least 54 inches (137 cm) above the ground (base) level to allow the rack to be positioned vertically.
2. In areas with hard soils and in warmer climates, legs can be set 24 inches (61 cm) deep without concrete under the bottom of the leg. Follow local guidelines.

2.2 Required Leg Spacing



2. Legs must be set apart with exact spacing shown here (370 cm). See [Step 1](#) for recommended leg setting.
3.  The concrete must be allowed to set before the exposure rack can be mounted on the legs.
4. Continue with [Section 3](#) for exposure frame assembly instructions.

NOTES: The tops of the legs must be on the same level, so that the rack sits level. A spirit level that sits across the top of both rack legs should be used to make sure they are the same level (not height).

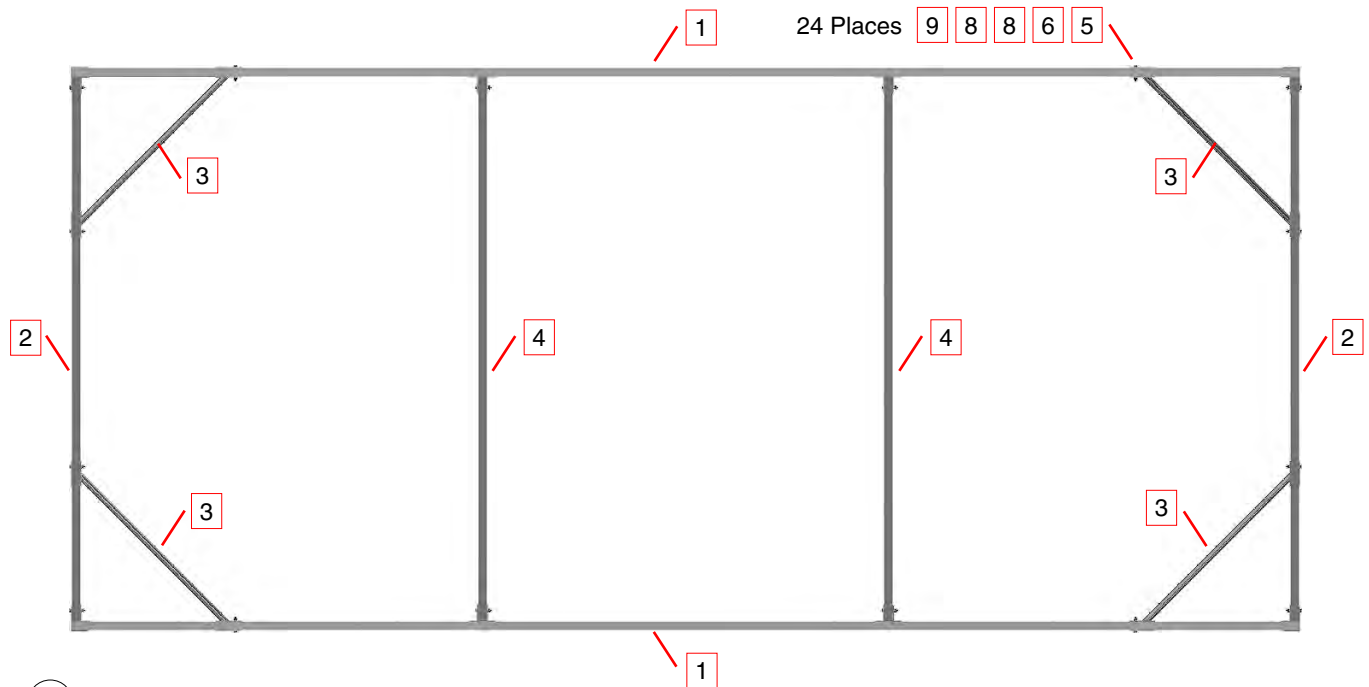
Section 3. FL-3142-X Exposure Frame Assembly

3.1 Exposure Frame Parts List

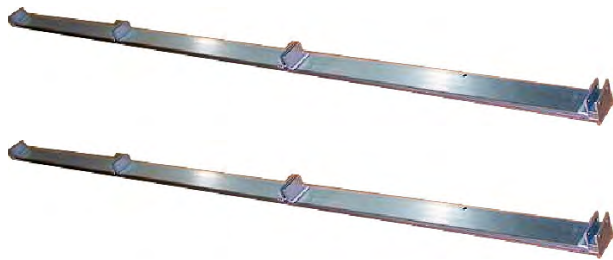
FL-3142-X Q-RACK Exposure Frame Parts			
Item	Part No.	Description	Quantity
1	FL-3057-X	Top and Bottom Rail	2
2	FL-3062-X	End Rail	2
3	FL-3064-X	Corner Support Assembly	4
4	FL-3063-X	Center Rail	2
5	U-40752	1/4-20 Hex Nut, 316 SS	24
6	U-40759	1/4" Spring Lock Washer, 316 SS	24
7	U-40760	5/8" Plastic UHMW Fender Washer	4
8	U-40765	1/4" Plastic UHMW Washer	48
9	U-5692	1/4-20 × 1-3/4 Hex Hd Cap Screw, 316 SS	24
10	U-5722	5/8"-11 Hex Nut, 316 SS	4
11	U-5762	5/8"-11 × 3-1/2" Hex Hd Cap Screw, 316 SS	2
12	U-5763	5/8" Flat Washer, 316 SS	4

1. In the kit locate the exposure frame parts listed above. These parts will be used to assemble the exposure frame.

3.2 Exposure Frame Assembly

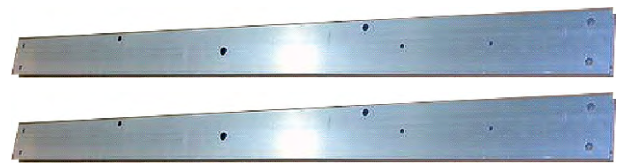


2. This diagram shows the main assembly of the exposure frame. Numbers identify items in the [Step 1](#) parts list. The assembled frame measures approximately 12.0' x 5.5' (3.7 m x 1.7 m). The frame should be assembled in an area that is significantly larger.



FL-3057-X

Item 1 x 2

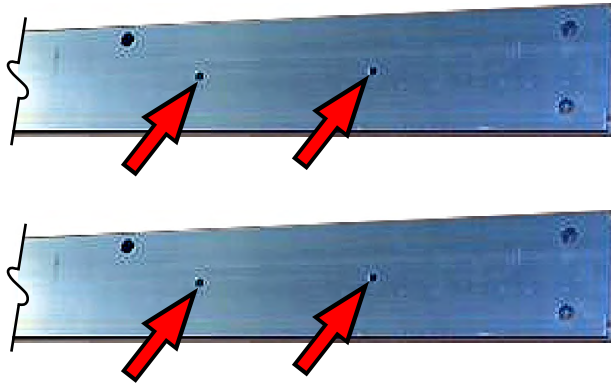


FL-3062-X

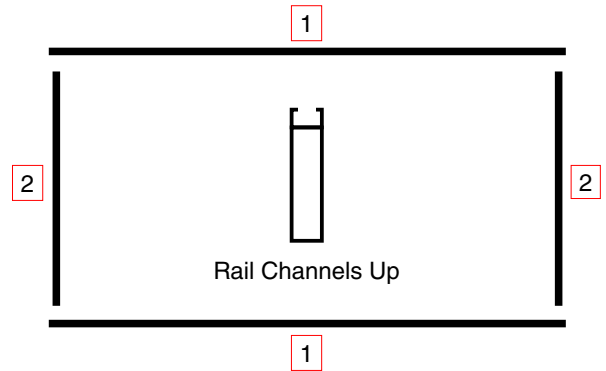
Item 2 x 2

3. Locate the top and bottom rails (Item 1) in the parts list and diagram.

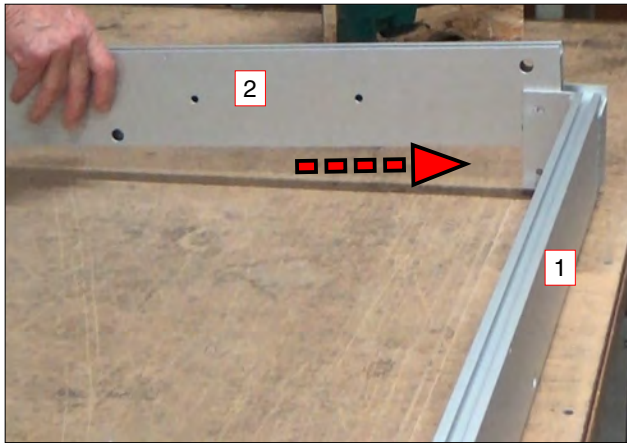
4. Locate the two (2) end rails (Item 2) in the parts list and diagram.



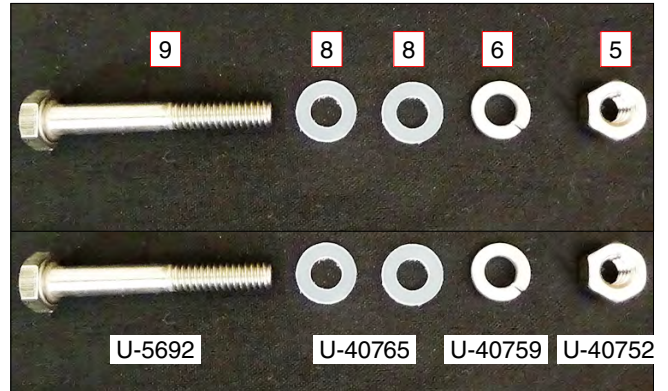
5. Position the two (2) end rails so that the mounting holes indicated here are at the same end of the rails.



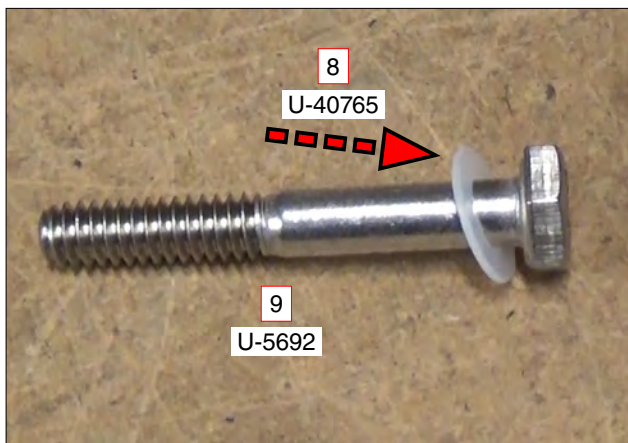
6. Lay the top and bottom, and two end rails on a flat surface with the rail channels up.



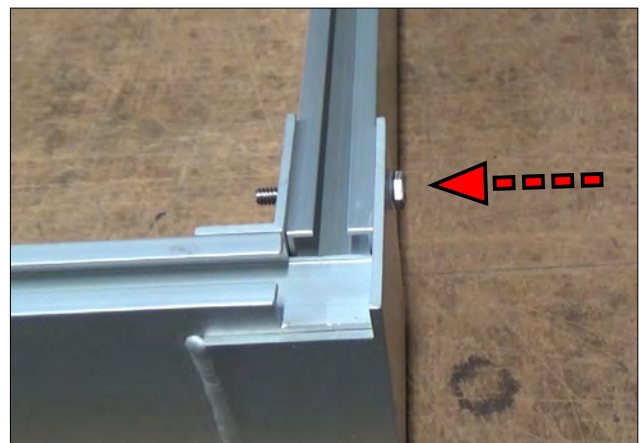
7. Slide the right end rail into the channel in the bottom rail.



8. Locate two (2) each of 1-3/4 Hex Cap Screw, spring lock washer, hex nut and four (4 each) plastic washers in the kit.

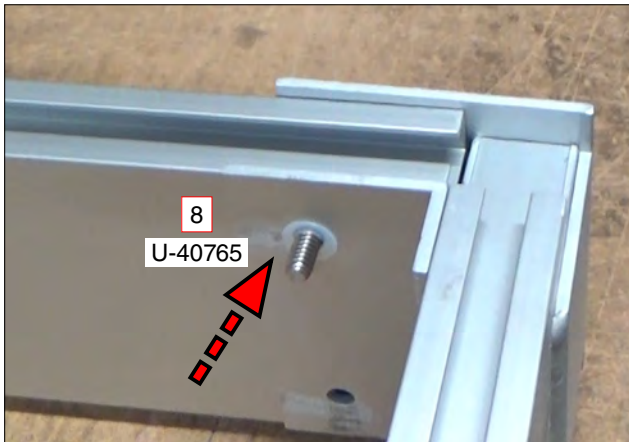


9. Install 1 plastic washer on a cap screw.

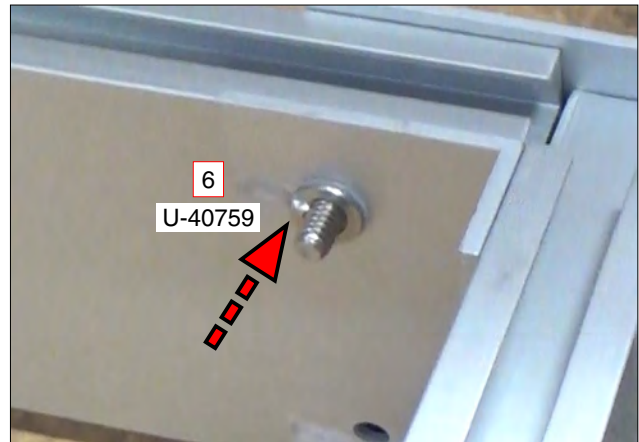


10. Install the screw through the holes in the rail channel.

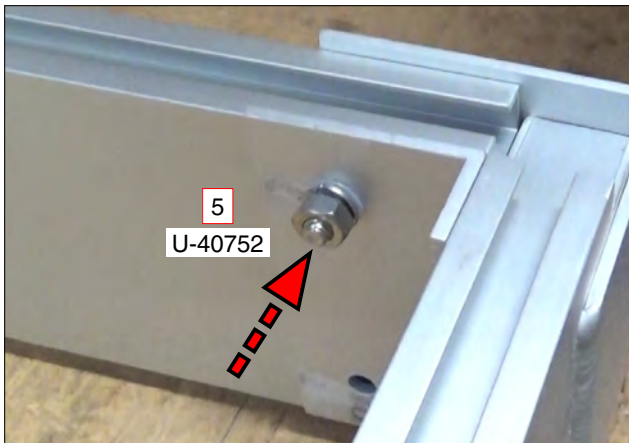
Section 3. Exposure Frame Assembly



11. Install a plastic washer on the screw.



12. Install a lock washer on the screw.



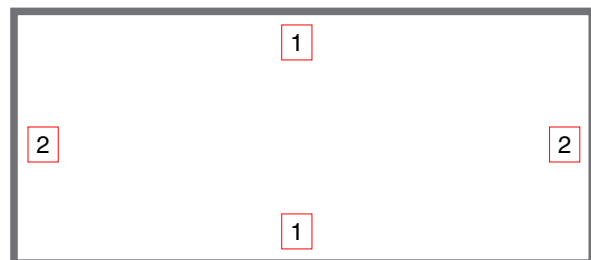
13. Install a hex nut on the screw. Hand tighten only.



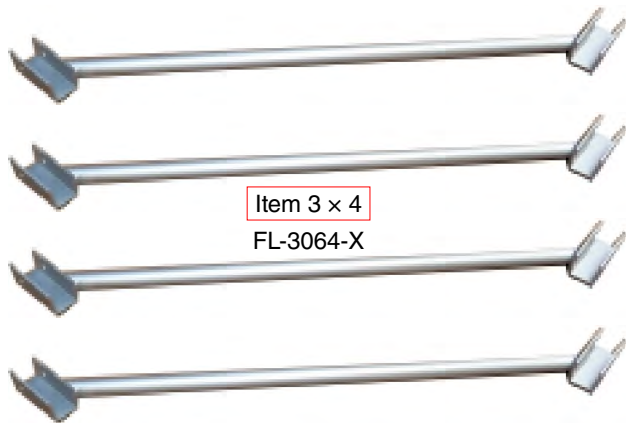
14. Repeat Step 9 through Step 13 to install the second screw, washers and nut.



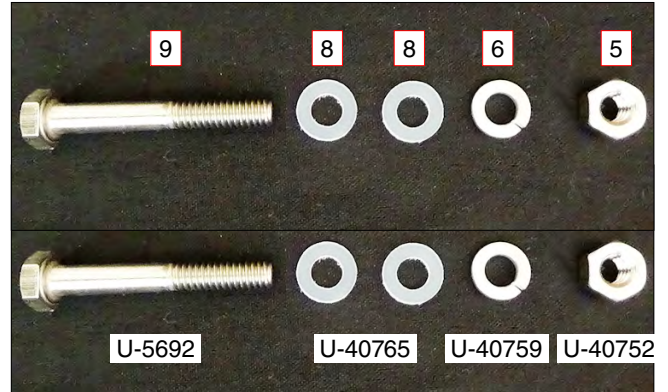
15. Repeat Step 7 through Step 14 to assembly all four (4) corners of the exposure frame.



16. Schematic showing assembled top and bottom, and two end rails. Make sure the through-holes in the opposite rails align.



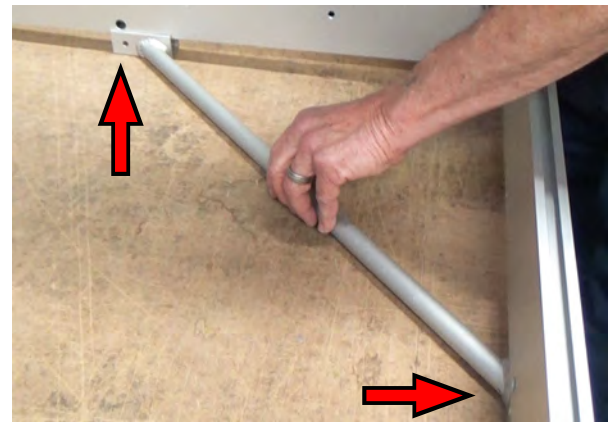
17. Locate the four (4) corner supports in the kit.



18. Locate two (2) each of 1-3/4 Hex Cap Screw, spring lock washer, hex nut and four (4 each) plastic washers in the kit.



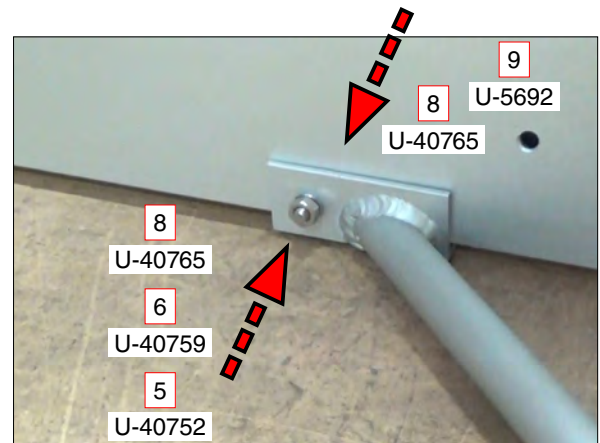
19. The four (4) corner supports will be installed inside the exposure frame as shown.



20. Lift one corner of the exposure frame. Slide a corner support into position as shown. Align the holes in the support and the frame.



21. Align the holes in the ends of the support with the holes in the frame.

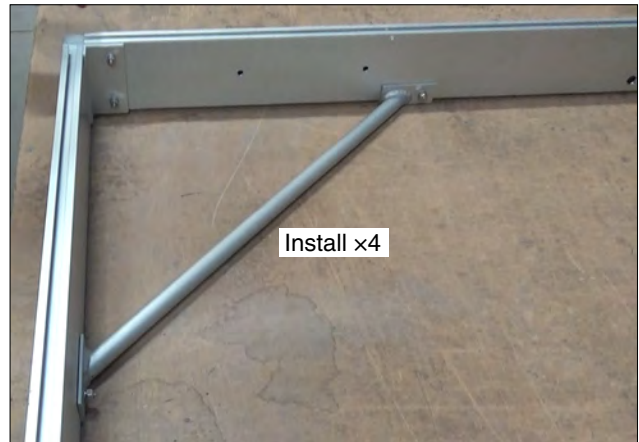


22. Install the screw, washers and nut in the support in the same order as in the exposure frame corners. Hand tighten only.

Section 3. Exposure Frame Assembly



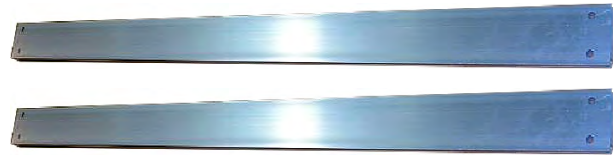
23. Repeat Step 21 and Step 22 to install the other end of the corner support. Hand tighten only.



24. Repeat Step 20 through Step 23 to install all four (4) corner supports.



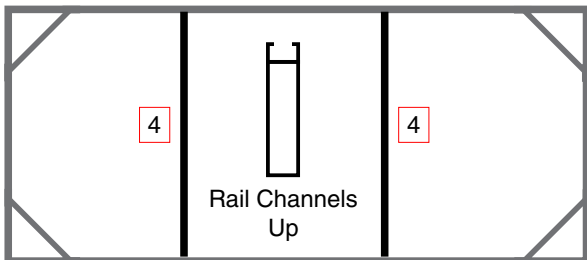
25. Schematic showing corner supports installed on the frame.



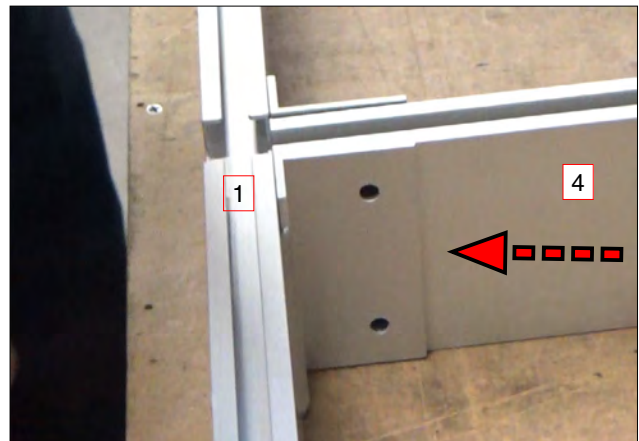
FL-3063-X

Item 4 x 2

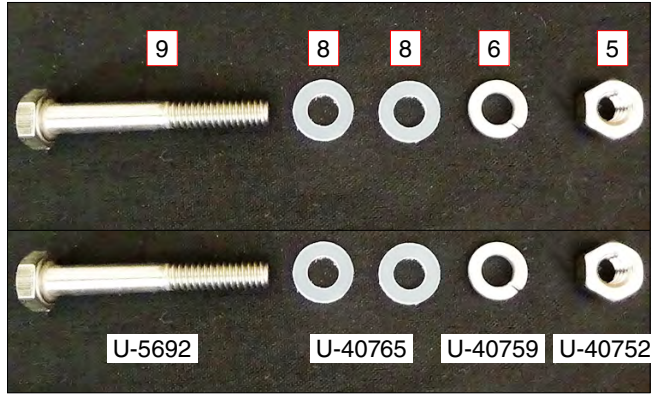
26. Locate the two (2) center rails in the kit.



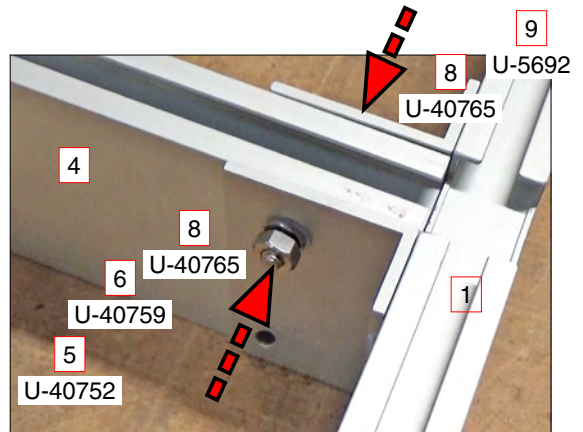
27. Layout the two (2) center rails with the rail channels up inside the exposure frame as shown.



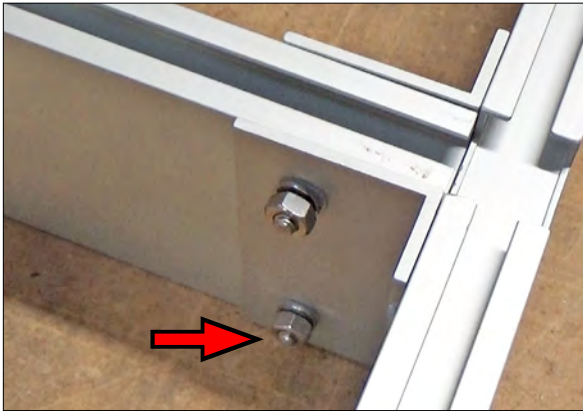
28. Slide a center rail into the angle brackets on the top and bottom rails.



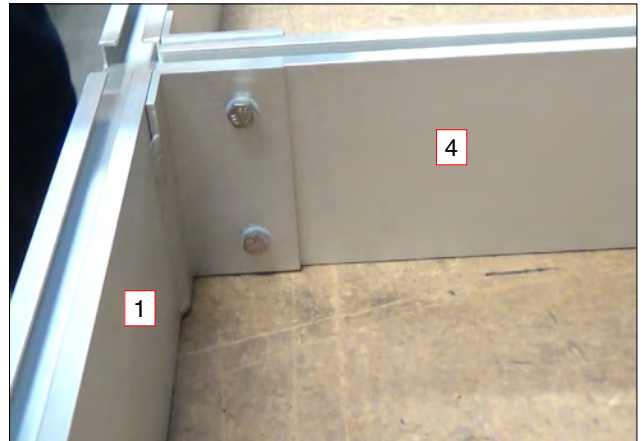
29. Locate two (2) each of 1-3/4 Hex Cap Screw, spring lock washer, hex nut and four (4 each) plastic washers in the kit.



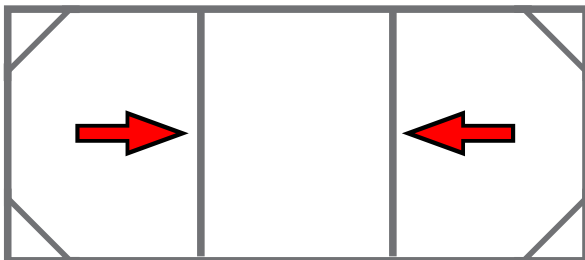
30. Install the screw, washers and nut in the order as shown. Hand tighten only.



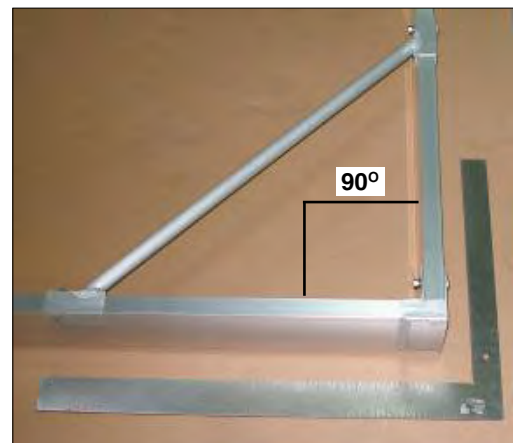
31. Repeat Step 30 to install the second screw, washers and nut at the other end of the rail. Hand tighten only.



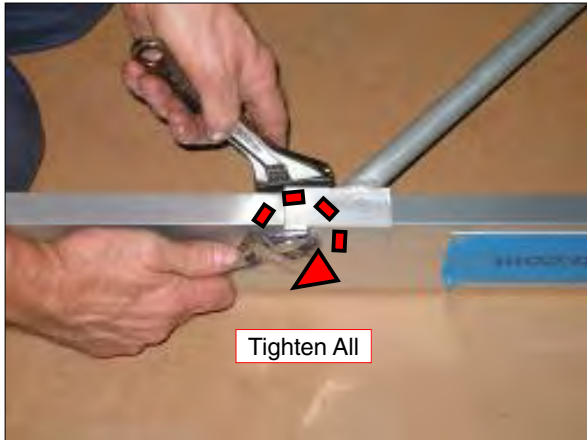
32. Repeat Step 29 through Step 31 to install the second center rail.



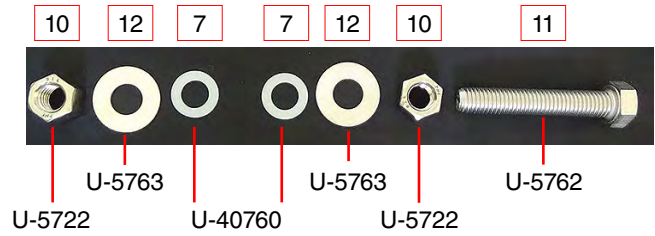
33. Schematic showing installed center rails.



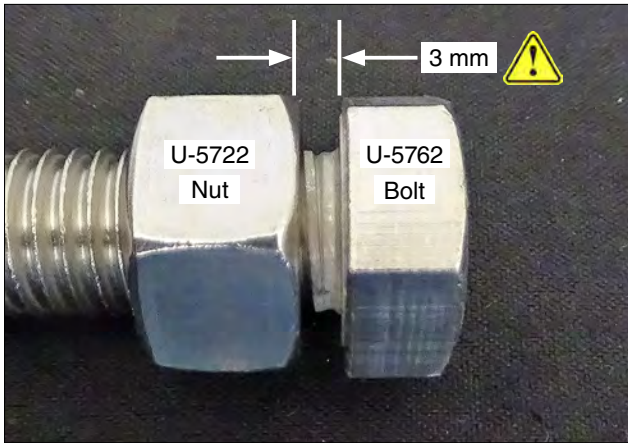
34. Use a large framing square to make sure that all four (4) external frame corners are 90 degrees.



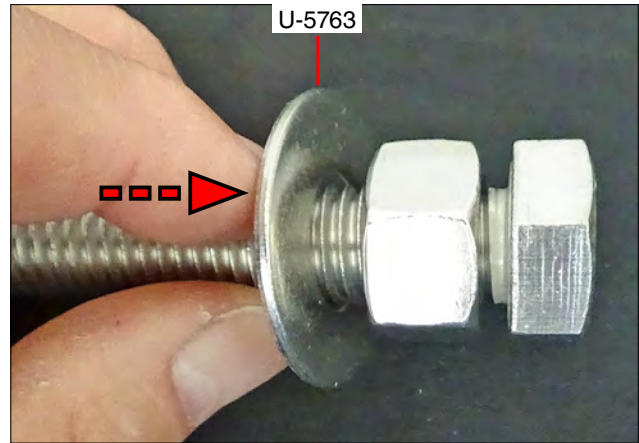
35. Tighten all the screws and nuts in the frame.



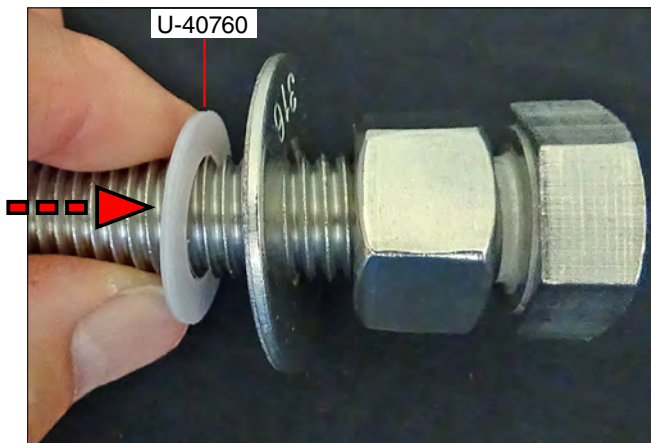
36. Locate one (1) 5/8 x 3-1/2" hex bolt, 2 nuts, 2 stainless steel washers and 2 plastic washers in the kit.



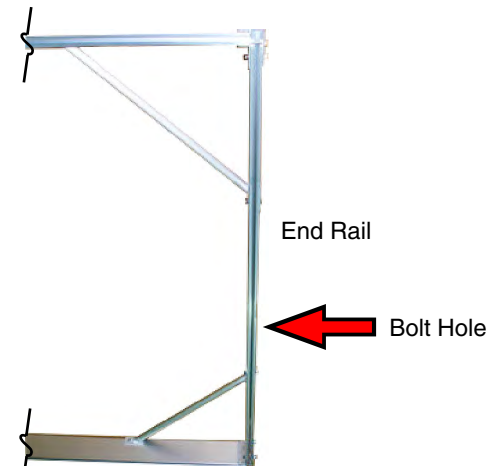
37. Thread a hex nut onto the bolt. Leave a 3 mm (1/8") space between the bolt head and nut as shown.



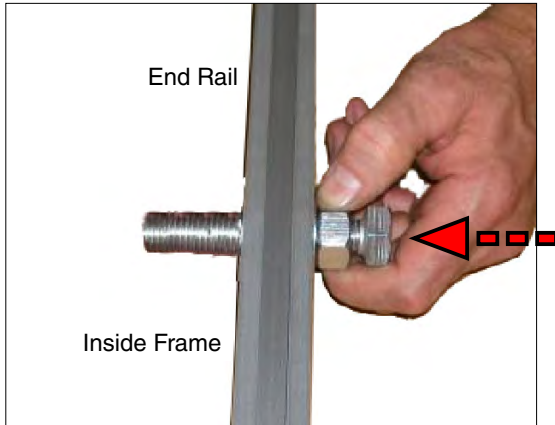
38. Install 1 steel washer on the bolt.



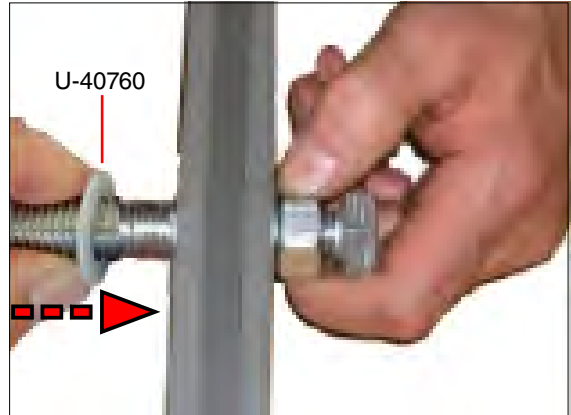
39. Install 1 plastic washer on the bolt.



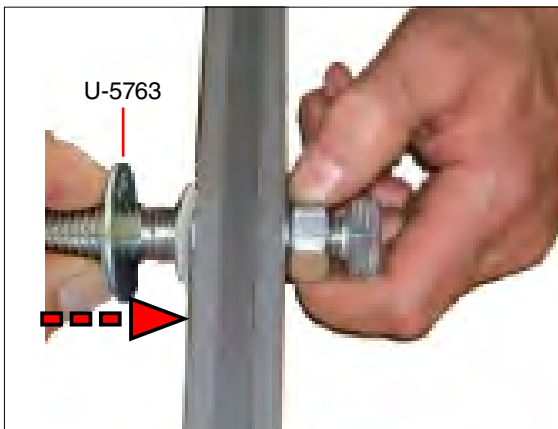
40. The hex bolt will be installed in the large hole in the end rail. Bolt head to the outside.



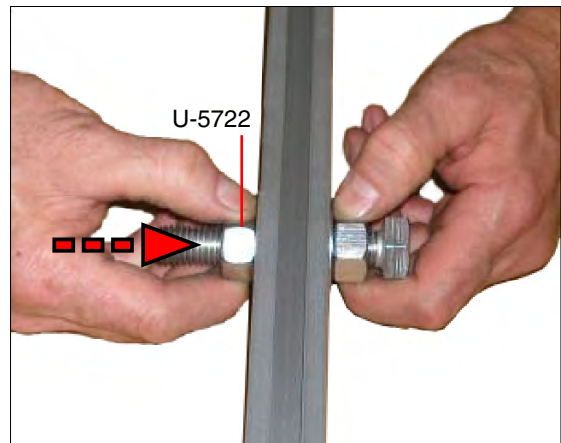
41. Slide the bolt into the hole in the end rail.



42. Install the second plastic washer on the bolt on the inside of the frame.



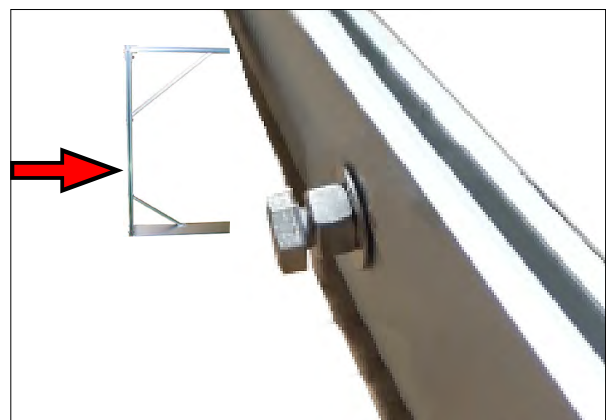
43. Install the second steel washer on the bolt.



44. Install the second nut on the bolt.

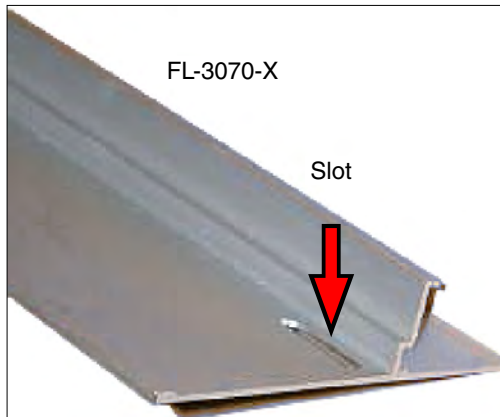


45. Tighten the nuts.



46. Repeat Step 36 through Step 45 to install the hex bolt and hardware in the other end rail.

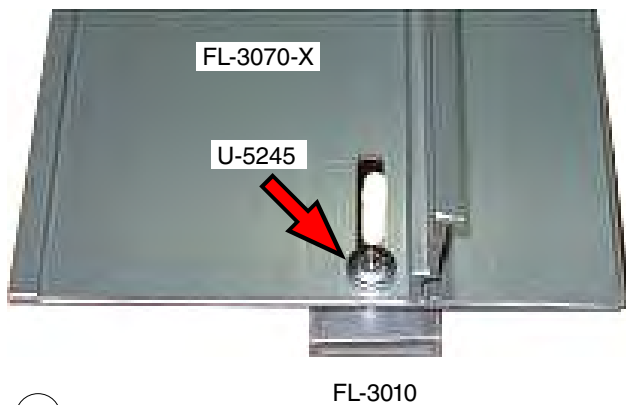
3.3 Panel Holder Assembly



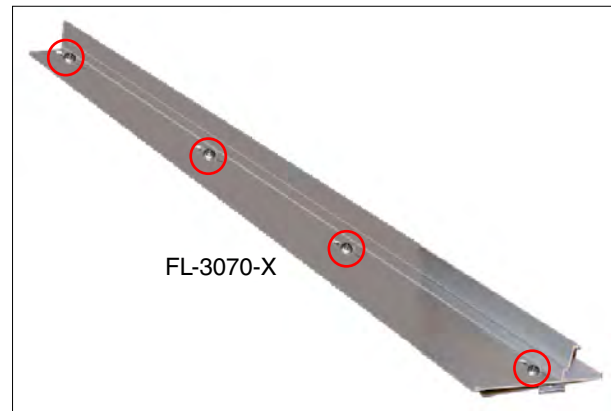
47. Locate the panel base in the kit. The base has four (4) slots, one at each end and one at approximately 122 cm (48") from each end.



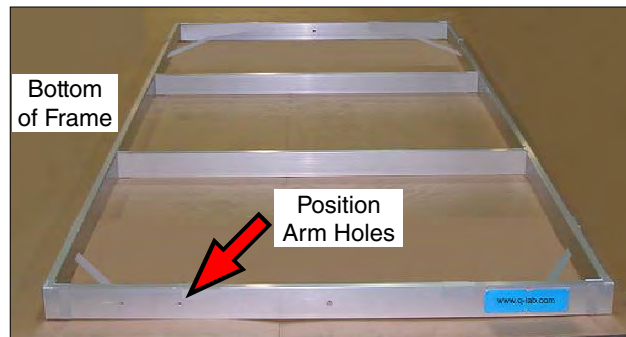
48. Locate four (4) #10-24 x 1/2" Phillips screws and four (4) sub-frame channel nuts in the kit.



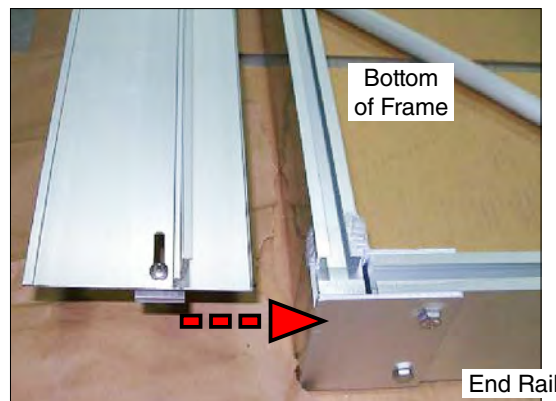
49. Install a nut with a screw in the slot at one end of the panel base as shown. Do not tighten nut all the way so that it can move to slide into the rail channel.



50. Repeat Step 49 to install the nuts and screws in the other three (3) slots. Hand tighten only.



51. The panel base is installed on the bottom of the frame. The position arm attachment holes are in the end rails near the bottom of the frame.



52. Slide the four (4) nuts on the base into the channels on the frame rails. As needed move the nuts in the slots to fit into the channels. The panel base should be flush with the bottom of the frame.



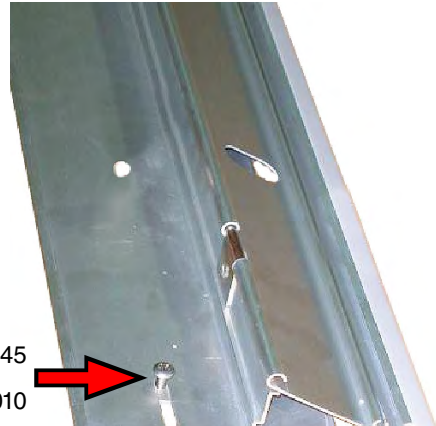
53. Locate a complete panel holder flap in the kit. The holder has four (4) slots, one at each end and one at approximately 122 cm (48") from each end.



54. Flip the top panel holder flap open.



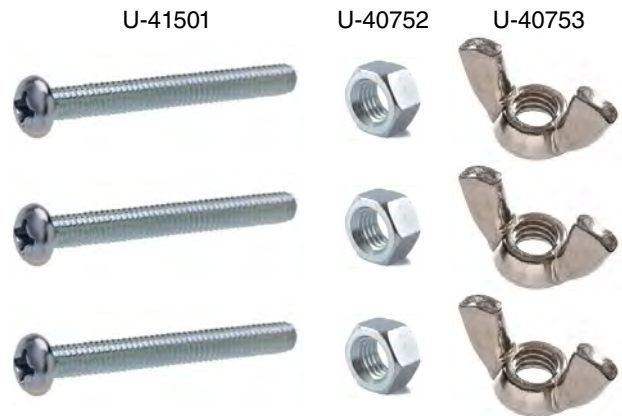
55. Locate four (4) #10-24 x 1/2" Phillips screws and four (4) sub-frame channel nuts in the kit.



56. Install a nut with a screw in the slot at one end of the panel holder as shown. Do not tighten nut all the way so that it can move to slide into the rail channel.



57. Repeat Step 56 to install the nuts and screws in the other three (3) slots. Hand tighten



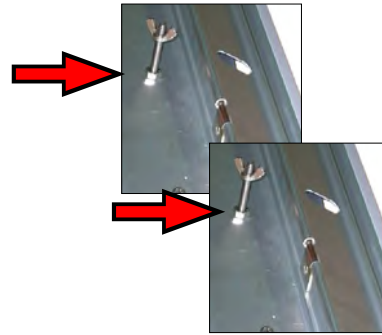
58. Locate three (3) each of 1/4-20 x 2.00" Phillips head screws, 1/4-20 hex nuts, and 1/4-20 wing nuts in the kit.

Section 3. Exposure Frame Assembly

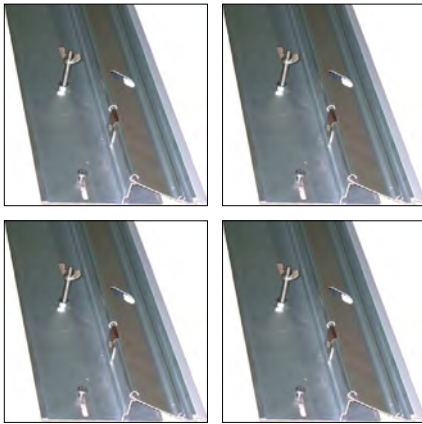
U-40753
 U-40752
 U-41501



59. Install the screw, hex nut, and wing nut in the round hole at one end of the panel holder as shown. Tighten the hex nut.



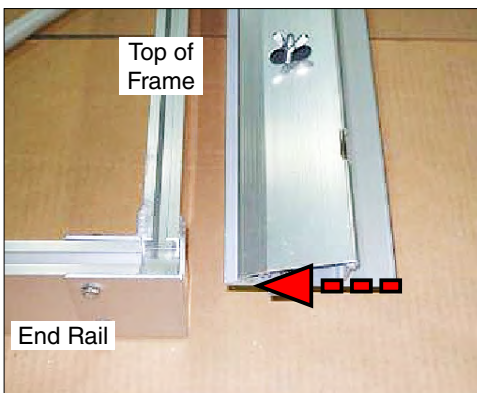
60. Repeat Step 59 to install the screws and nuts in other two (2) holes.



61. Repeat Step 53 through Step 60 to install the screws and nuts in the other four (4) panel holder flaps.

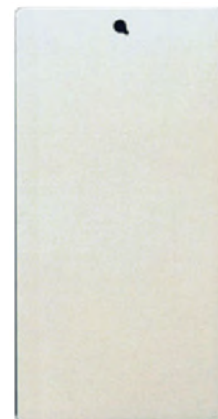


62. Close the top flap on one of the panel holders. Adjust the wing nut to fit through the slot in the flap as shown.

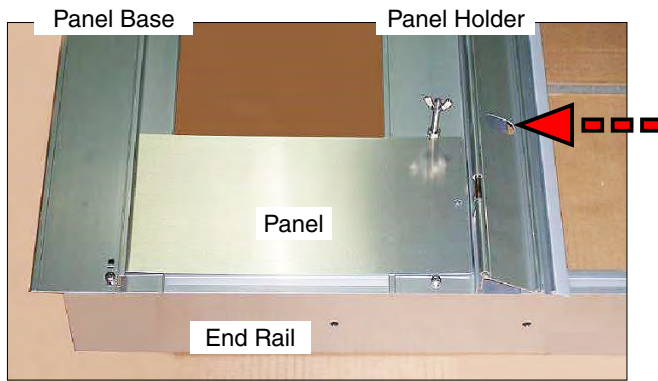


63. From the top of the frame, slide the four (4) nuts on the panel holder into the channels on the frame end and center rails. As needed move the nuts in the slots to fit into the channels.

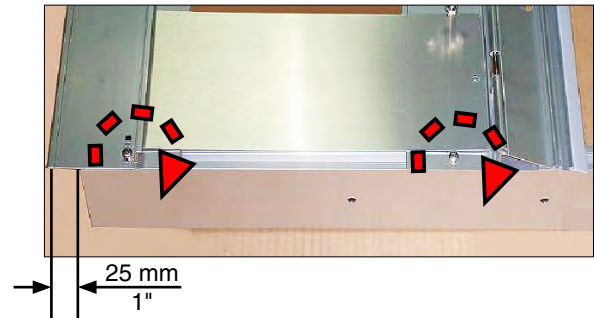
Sample Panel



64. Get a sample panel of the size to be mounted on the frame.



65. Slide the panel holder down the frame, open the top flap and insert the panel leaving a 1/8-1/4" (3-6 mm) gap for panel expansion. Adjust the holder to secure the panel between the holder and the base.



66. Adjust the positions of the base and holder as shown. Tighten all of the screws in the channel nuts.



67. Repeat Step 62 through Step 66 position the other four (4) panel holders on the frame.

Section 4. Mount Exposure Frame on Legs

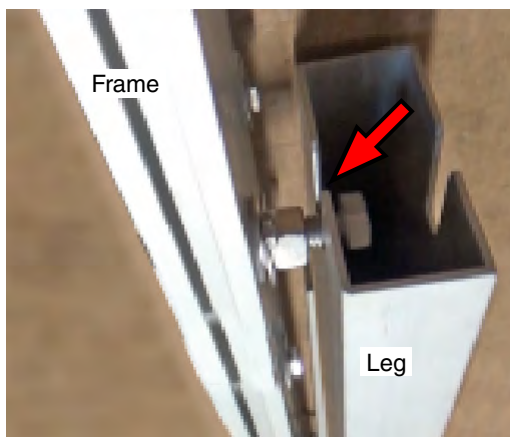


The exposure frame legs must be set in concrete before continuing.



1. See [Section 2](#) for information on setting the exposure frame legs.

2. Have two people lift the assembled exposure frame. **NOTE:** the positioning arm mounting holes on the frame end rails go to the bottom of the frame.



3. Lower the large hex bolts at each end of the exposure frame into the slots in the top of the legs.



4. If necessary adjust the hex nuts on the bolts to fit the exposure frame into the slots in the legs.

Part No.	Description
FL-3071-K	0° - 5° Position Arm Kit
FL-3032-K	45° Position Arm Kit
FL-3126-K	90° Position Arm Kit

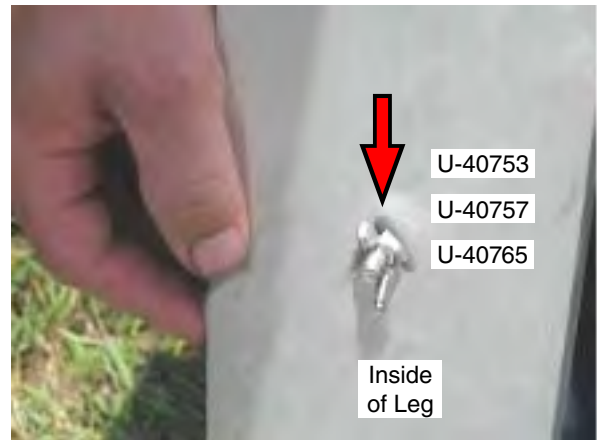
Part #	Description	Qty.
U-40749	1/4-20 × 2.25" Phillips Pan Head Screw	2
U-40757	1/4 × 1.0" Fender Washer Stainless Steel	8
U-40753	1/4-20 Wing Nut Stainless Steel	4
U-40758	1/4-20 × 3.00" Phillips Pan Head Screw	2
U-40765	1/4" Plastic Washer	8

5. Use one of the position arm kits listed above to position the exposure frame as the desired angle.

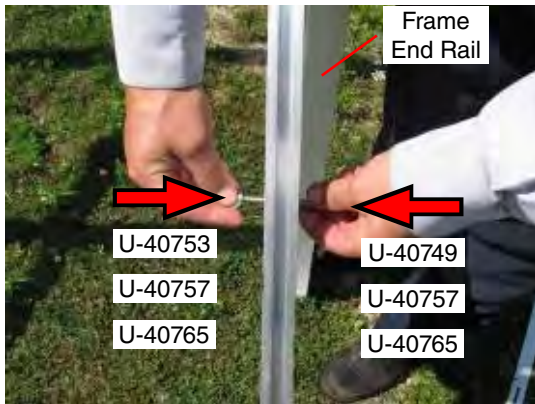
6. For the 0-5° (FL-3071-K) and the 45° (FL-3032-K) arm kits locate the items listed above in the kit. For the 90° arm kit (FL-3126-K) go to [Step 14](#).



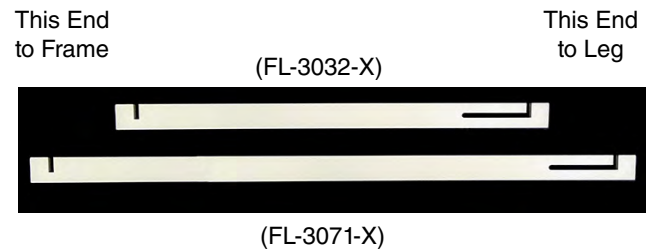
7. From the outside of a leg, insert a 3" screw (U-40758) with washers into the hole on the leg as shown. The plastic washers go next to leg.



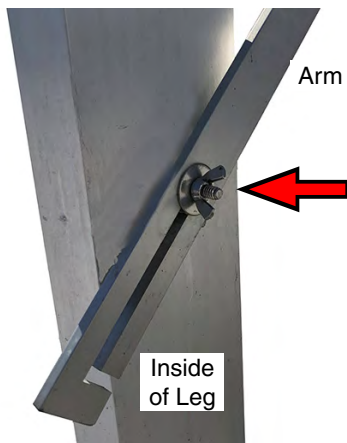
8. From the inside of the leg install a plastic washer, steel washer and wing nut on the screw.



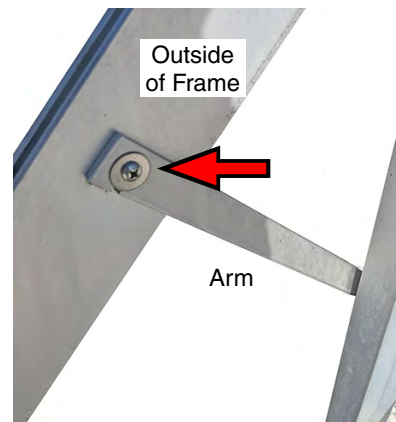
9. In the adjacent exposure end rail, install a 2.25" screw with washers and wing nut (in the same order as on the leg) into the hole near the center of the frame end rail. The plastic washers go next to rail.



10. Locate the 45° (FL-3032-X) or the 0-5° (FL-3071-X) position arm in the kit.



11. Slide the position arm onto the screw under the washers on the inside of the leg.



12. Slide the other end of the arm onto the screw under the washers on the outside of the exposure frame end rail. Tighten all wing nuts.

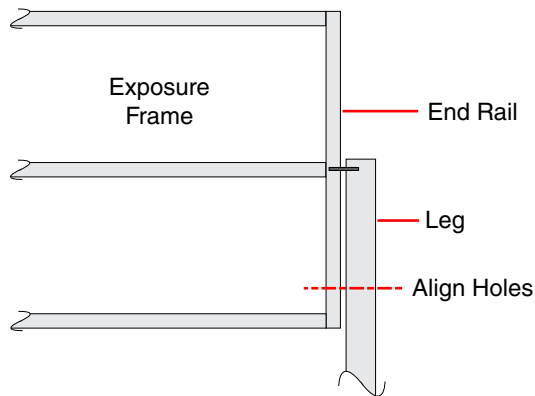
Section 4. Mount Exposure Frame on Legs



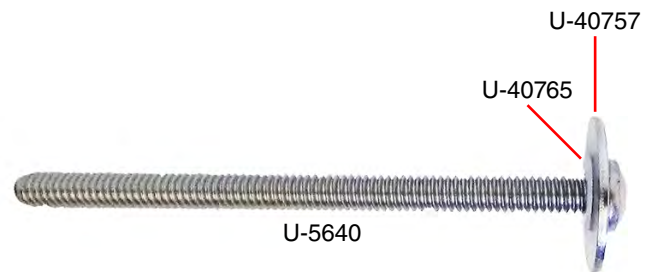
13. Repeat Step 7 through Step 12 to install the second positioning arm at the opposite end of the frame. Go to Step 22.

Part #	Description	Qty.
U-5768	Spacer, Aluminum, 0.63" Long	2
U-5640	1/4-20 x 4.00" Phillips Pan Head Screw	2
U-40757	Fender Washer, 1/4" x 1.00", Stainless Steel	4
U-40753	1/4-20 Wing Nut, Stainless Steel	2
U-40765	1/4" Plastic Washer	4

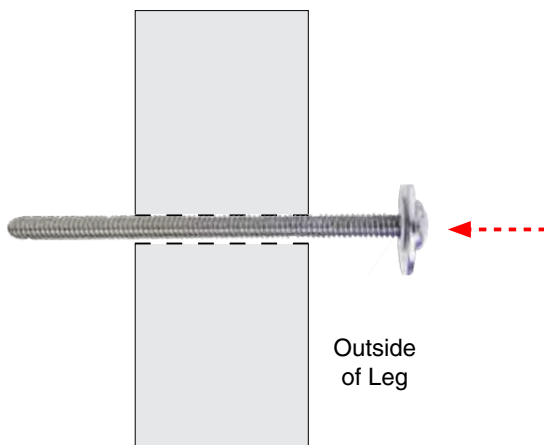
14. For the 90° arm kit (FL-3126-K) arm kits locate the items listed above in the kit.



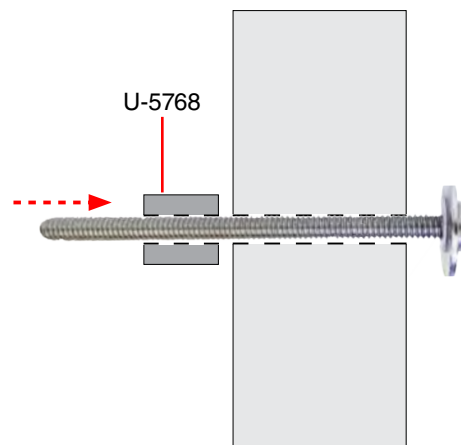
15. Position the exposure frame vertically, with the frame end rails aligned with the legs. Align the holes in the frame and leg.



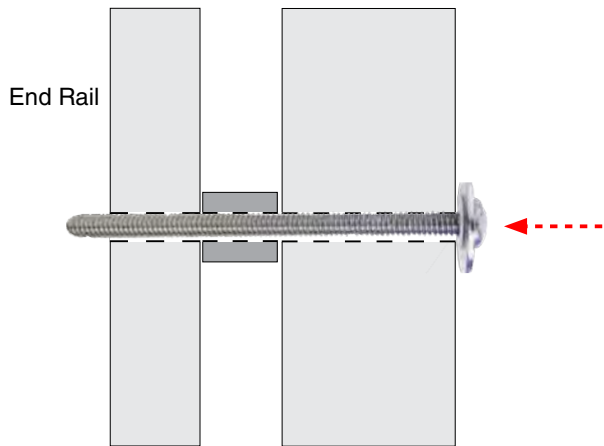
16. Install a steel washer and a plastic washer on a screw.



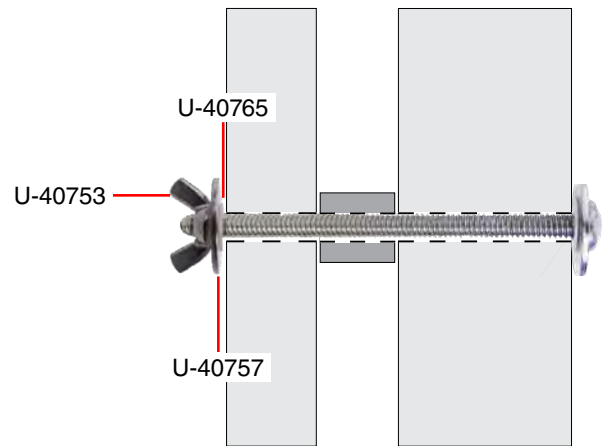
17. From the outside of the leg insert the screw into the hole in the leg.



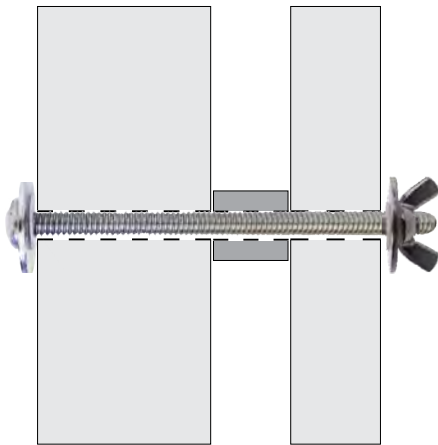
18. Slide the spacer onto the screw between the leg and the frame end rail.



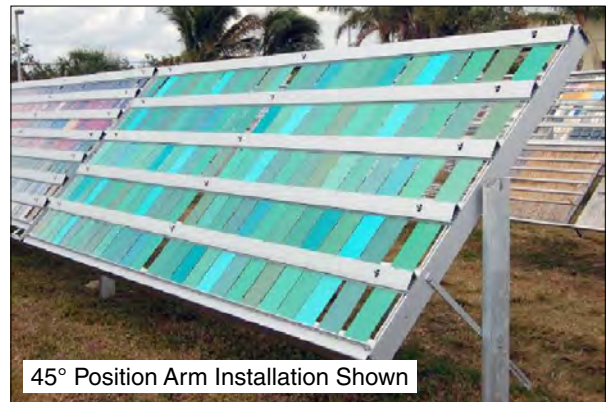
19. Slide the screw all the way through the end rail.



20. Install the plastic washer, the steel washer and the wing nut on the screw. Tighten the wing nut.



21. Repeat Step 16 through Step 20 to install the screw, washers and nut in the opposite leg and end rail.



22. Panels are mounted by opening panel holder flaps, placing panels, closing flaps, and tightening wing nuts.

Section 5. Repair and Tester Support

- Q-Lab Repair and Tester Support is available Monday through Friday from 8:30 AM to 5 PM (international office time).
- Please contact Q-Lab support (see contact information below).
- You can also visit our website at www.q-lab.com to register your tester to access additional useful troubleshooting guides, operating manuals, and technical information.



For sales, technical, or repair support, please visit:

Q-Lab.com/support

Westlake, Ohio USA • Homestead, Florida USA • Buckeye, Arizona USA
Bolton, England • Saarbrücken, Germany • Shanghai, China