
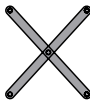



Instructions for Using LJ-3090 BalconyPro™

Patent Pending

- Note: This tool will span balcony runs up to 6' (1828.8 mm) in length. Additional components can be added for longer balcony runs and are sold separately.
- Lay out the Balustrade Centerline per the L.J. Smith Installation Guide Step #7. Note that the balcony balustrade centerline is generally set in from the face of the balcony a distance equal to one-half of the baluster square dimension. However, it is important to consider the location of the balcony newel posts and the rosettes against which the balcony handrail will terminate when determining the balustrade centerline.
- Determine the maximum spacing of the balcony balusters allowed by your local building codes. The chart below complies with the 4" Sphere Code.
- Measure the length of each level balcony run between the newel posts or between the newel post and the wall.
- Using the table below, determine the correct number of Marker Sticks and Cross Arm Assemblies needed in the BalconyPro™ to lay out the correct baluster spacing for each level balcony run. **Note: The "End Assembly" Cross Arms and marker sticks are silver to distinguish them from the body components which are black. Do not disassemble the silver End Assemblies except where they attach to the first black Marker Stick.**

Balcony Run Length	Sphere Code	 Number of "Black" Body Marker Sticks Needed *	 Number of "Black" Cross Arm Assemblies Needed **	 Number of "Silver" End Assemblies Needed
2' (609.6 mm)	4" (101.6 mm)	3	2	2 (1LH & 1RH)
3' (914.4 mm)	4" (101.6 mm)	5	4	2 (1LH & 1RH)
4' (1219.2 mm)	4" (101.6 mm)	8	7	2 (1LH & 1RH)
5' (1524 mm)	4" (101.6 mm)	10	9	2 (1LH & 1RH)
6' (1828.8 mm)	4" (101.6 mm)	13	12	2 (1LH & 1RH)
7' (2133.6 mm)	4" (101.6 mm)	16	15	2 (1LH & 1RH)
8' (2438.4 mm)	4" (101.6 mm)	18	17	2 (1LH & 1RH)
9' (2743.2 mm)	4" (101.6 mm)	21	20	2 (1LH & 1RH)
10' (3048 mm)	4" (101.6 mm)	23	22	2 (1LH & 1RH)

* The number of "Black" Marker Sticks are those required in addition to the End Assemblies which consist of (1) "Silver" stick.

** The number of "Black" Cross Arm Assemblies needed in addition to the End Assemblies which include (1) "Silver" Cross Arm Assembly each.

Example: Balcony run measures 50" (1270 mm) or 4'-2" (1270 mm) and maximum center to center spacing per code is 4" (101.6 mm)

In order to not exceed the 4" (101.6 mm) spacing requirement, round up to the nearest even Balcony Length. Therefore, in this example there needs to be a 5' (1524 mm) balcony run requiring 10 "Black" Marker Sticks and 9 "Black" Cross Arm Assemblies in the body of the BalconyPro™.

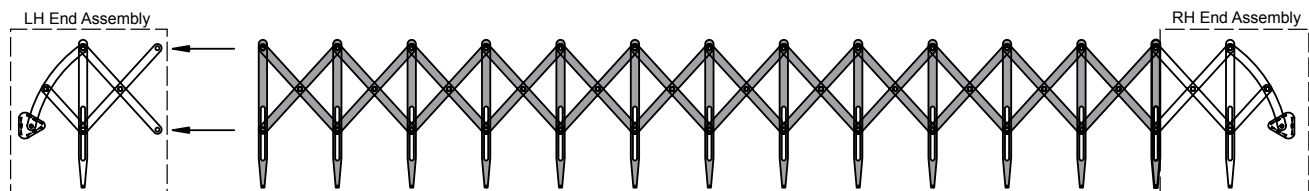


Figure A

- Configure the BalconyPro™ for a given balcony run length by adding or removing black Marker Sticks and Cross Arm Assemblies from the body of the tool.
 - Remove one of the End Assemblies from the tool where the silver Cross Arms attach to the first black Marker Stick by removing two of the black Snap Rivets. **Figure A**
To remove the rivet, push the center holding pin out of the rivet with a small screwdriver or nail. Remove the rivet.
 - Set the End Assembly aside. It will not be needed until the body section of the tool is adjusted and assembled.
 - Beginning with the first black Marker Stick that is attached to the remaining silver End Assembly, count until the appropriate number of black Marker Sticks is reached. Remember to count only the black Marker Sticks.

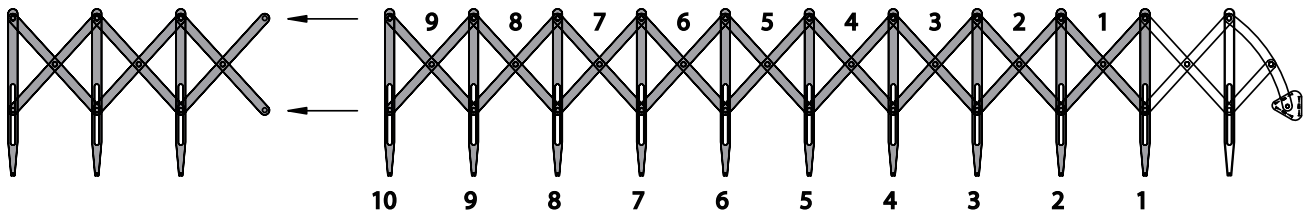


Figure B

d. Remove the black Snap Rivets from the last required Marker Stick and set aside the remaining sections. **Figure B**

e. Using the black snap rivets, reattach the silver End Assembly that was removed in (a) above. **Figure C**

To attach the rivet, place it upright on a flat and stable surface. Align the Marker Stick and Cross Arms over the rivet making certain that the components of the assembly are in the proper order (one over or under another) as compared to other assemblies within the unit. After all three components are aligned on the rivet, push the holding pin back through the rivet.

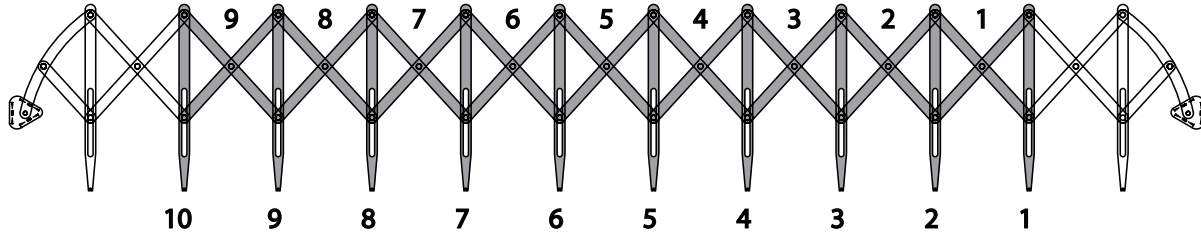


Figure C

7. Rotate the three-sided cam on the End Arms so that the appropriate edge will rest against the wall or newel posts. The appropriate edge is determined by the size of the baluster square being used in this installation. **Figure D**

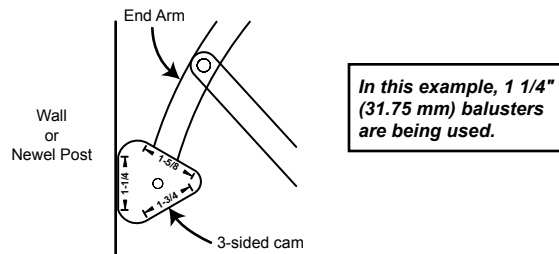


Figure D

8. Lay out the BalconyPro™ on the floor along the balustrade centerline, stretching it as far open as it will go.

9. Set the three-sided cam against the wall or newel post on one end. Slowly collapse the BalconyPro™ inward until the three-sided cam, on the other end, just slips into place between the wall or newel post. The baluster spacing should now be set equally along the balcony run as indicated by all of the black and silver Marker Sticks.

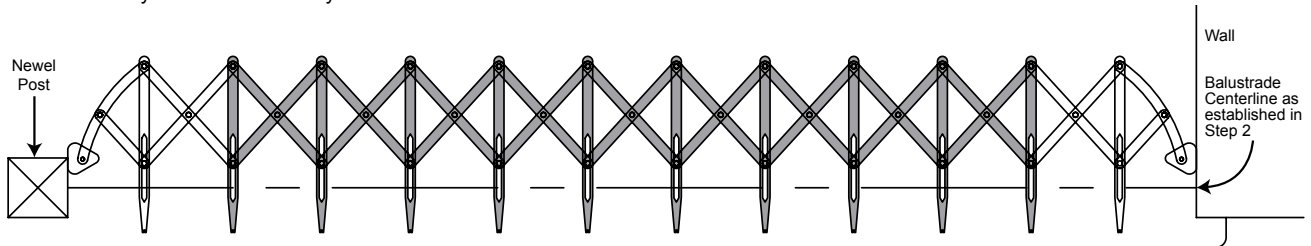


Figure E

10. Mark the locations of each of the baluster centers as they intersect the balustrade centerline that was marked on the floor in Step 2 above. Place each mark through the slot in the marker sticks. Depending on the situation, it may be necessary for the ends of the Marker Sticks to extend beyond the edge of the balcony in order to get the three-sided cams to contact the newel posts or walls.

Figure E

11. Repeat steps 2 through 10 for each of the balcony runs for which the baluster lay out is desired.