



## Transformer Top Angle Shoe Instructions for the 9127, 9128, 9147, 9148, 9197 and 9198

Contents of package:  
2 top angle shoes

**9197 and 9198 top angle shoes require the bottom of the handrail be more than 1-3/4" wide.**

**We recommend watching the installation video at [www.TheTransformerSystem.com](http://www.TheTransformerSystem.com) before starting.**

**Please read these instructions *entirely* before starting.**

**Always install base shoes before top shoes.**

These angle shoes are designed to be used underneath the angled handrail and on top of the baluster and cannot be used on the bottom of the baluster.

These shoes are offered in two different angles and the right one for your installation will depend on the rise and run of your stairs. The steeper stairs will use the higher angle shoes.

If you are replacing pin top balusters follow the Pin Top instructions immediately below this paragraph or if you are replacing square top balusters then skip to the instructions for Square Top Baluster Replacement.

### Pin Top Baluster Replacement

*It is not a requirement for installation that top shoes be used on **1900 Series** pin top balusters. It is a personal preference.*

If your old balusters were pin top balusters then they would have been installed in a hole in the handrail. Measure the diameter size of the top of the baluster you removed carefully. Most often the size of the top of the baluster will be 5/8" but occasionally will be 3/4" or another size. The ideal depth for the hole into the handrail is 3/4" but these depths usually vary. Crown Heritage offers a 5/8" bushing

and a 3/4" bushing. To provide stability you should use a Transformer System Bushing (sold separately) on top of the iron baluster if the hole in the rail is 5/8" up to 7/8". The 5/8" Transformer System Bushing is used for holes that are 5/8 and 11/16". The 3/4" Transformer System Bushing is used for holes that are 3/4" up to 7/8". If the hole in the rail is larger than 7/8" then it would be best to determine the size of the hole and buy a hardwood dowel of that size and plug the hole. Then drill a new hole in the plug that is 1/2" wide.

### Square Top Baluster Replacement

If your old balusters were square top then you will need to drill a baluster hole into the bottom of the handrail. Carefully remove the fillet that is installed between each square top baluster and with a pencil number the fillet location. You may start at one end of the stairs and number each fillet in order so that you can replace them in the same sequence. With the fillet removed, mark the center of the location where you will drill the hole in the bottom of the handrail. Using a 4' level or a 4' T-square find the center of the hole in the tread or the center of the dowel where you have bored the 13/64" hole and stand the level straight up against the side of the handrail. For 1200 and 1400 Series installations drill a 1/2" spade bit drill the hole into the handrail 3/4" deep. For 1900 Series installations drill the hole using a 9/16" spade bit 3/4" deep. Make sure the hole in the handrail is at right angles to the tread and floor which is also called plumb. A bushing is not required if you have drilled a 1/2" hole (for 1200 and 1400 Series or a 9/16" for 1900 Series installations) in the bottom of the handrail. Now you are ready to install the baluster.

To mark the baluster for trimming (see complete instructions for cutting iron balusters on the website or in the written instruction pamphlet) you must have the baluster socket in place. Invert the baluster and insert the top of the baluster in the baluster socket making sure the set screw does not prevent the baluster from resting on the bottom of the socket. While holding the baluster plumb and in line with the hole you have drilled, make a mark on the baluster at the bottom edge of the rail and then cut the baluster at this mark. After cutting the iron baluster to the proper length place the top and base shoes onto the baluster. Make sure you use the base shoe on the bottom of the baluster. Be careful to orient the shoes in the correct direction and to align the set screws in the same direction up and down the stairs. You may now install the baluster by inserting the base of the baluster into the previously installed baluster socket. Just before you insert the round iron dowel top into the hole put one of the bushings on top of the iron dowel. Gently push the baluster into a vertical position in the hole.

For more detailed instructions visit our website at [www.TheTransformerSystem.com](http://www.TheTransformerSystem.com).

### WARRANTY:

*Crown Heritage conditionally guarantees its products to be free from defective material or workmanship for one (1) year. The Transformer System of iron balusters and shoes is made with close specifications to work correctly. Using a competitor's balusters will void the warranty.*

### REGISTER YOUR PRODUCT:

*To activate your warranty and to receive updates and notices of new products which will enhance your installation please register this product at [www.TheTransformerSystem.com](http://www.TheTransformerSystem.com).*