

**Chapter 16 – Installing Handrail**

Installing the Handrail	<ol style="list-style-type: none"><li>1. At the top and bottom stair treads, measure vertically 31" above the nose of the treads and mark the wall. Pull a string line very tight between these marks. This line represents the location of the bottom holes in the three handrail mounting brackets and will place the top of the handrail about 35" above the stairs (must be between 34"-36").</li><li>2. Along this line, mark the wall for locations of the top and bottom handrail brackets. Locate the top bracket 10-12" from the top end of the stairway wall and the bottom bracket 10-12" from the bottom end of the stairway wall, or from door trim if present. Install handrail brackets at both top and bottom locations.</li><li>3. Cut the handrail to a length such that each end will be 2"-3" from the end of the wall or door trim. With the flat side of the handrail firmly on the bed of the saw, cut opposite 45° miters on each end of the handrail.</li><li>4. Before attaching the handrail to the top and bottom brackets, locate the center of the handrail and attach the middle bracket to the flat underside at this location.</li><li>5. Set the flat side of the handrail on the top and bottom handrail brackets in the position defined in Step 4 and attach the handrail clips to the bottom of the handrail.</li><li>6. Sight along the handrail and raise and lower the center bracket along the wall until any bow in the rail is minimized. Screw the middle bracket to the wall.</li><li>7. Cut opposite 45° miters on a piece of handrail at least 20" long. Move the handrail mounting brackets under the handrail to their farthest positions from the wall. Measure from the long end of the miter to the wall at each end (the distances may not be the same) and carefully cut two pieces these lengths from the short, mitered piece.</li><li>8. At each end of the rail apply wood glue to the miter cuts of both the handrail and the return piece. Set the return piece in place, and hold in place with a clamp. If necessary, wedge a tapered shim between the wall and the end of the return to ensure good contact at the glue joint.</li><li>9. Predrill the miter joint and screw the return to the rail using one screw in each direction, with a slight vertical offset. Wipe off excess glue and putty the holes. If the return is not tight to the wall, loosen the screws holding the bracket to the rail, push the return tight to the wall, and retighten the screws.</li></ol>
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## Quality Points

### Chapter 16 – Installing Handrail

- Handrail is straight and any bow is minimized
- Top and bottom handrail returns are tight to the wall
- Brackets are secure to wall and bottom of handrail
- Top of the handrail is at between 34" – 36" above the nose of the stair treads