

IMPORTANT: Please read instructions thoroughly before beginning installation.

The following instructions are designed to be used for the installation of our Linear Collection of wood newels and tube railing. The rake newels in this collection are designed for stairways with 7 1/2" rise and 10" run (approx 36.8°), a rake handrail height of 34"-38" and a level handrail height of 36", 39" or 42". We recommend installing a newel at every corner or change in direction as well as placing a "Center Newel" at 48" intervals on the rake and level runs. Before proceeding with the following steps, the balustrade centerline should be marked on the treads and balcony. **Consult your local building code official before purchasing and installing this system.** Tube railing is intended to be used as a guard/fence and is not intended for overhead or any condition involving motion. Load limits and breaking points may vary depending on installation. An engineer or qualified contractor should be consulted regarding the suitability of this system for particular applications.

Wood Linear Tube Newel Applications

Rake Up Newel (TR-410U)	Use this newel as the starting newel on the first tread at the bottom of each stairway flight
Rake Center Newel (TR-420)	Use this newel on the stairway midway between the Rake Start Newel and the Rake Stop Newel at 48" intervals
Level Start/Stop Newel (TL-410)	Use this newel at the beginning or end of each level run
Level Corner Newel (TL-410C)	Use this newel at the corner of two level runs
Level Down Newel (TL-410D)	Use this newel on the second floor landing at the top of the stairway flight
Level Center Newel (TL-420)	Use this newel on level runs midway between the Level Start/Stop Newels at 48" intervals
Blank Newel (B-400-48)	This newel is not pre-bored and can be custom drilled at the jobsite and used at any level location

Tools/Materials list:

Power Drill
 5/16" Twist Bit
 5/8" x 3" Flare Spade Bit
 9/16" wrench
 Tape Measure
 Construction Adhesive

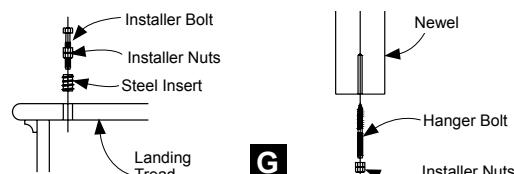
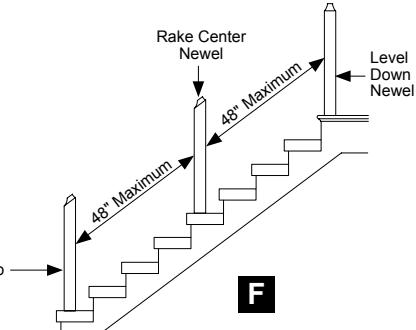
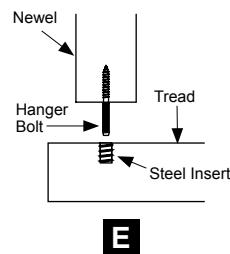
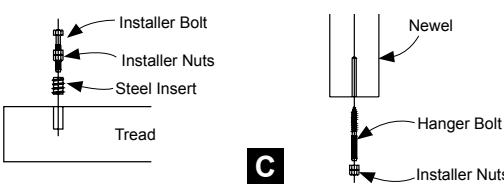
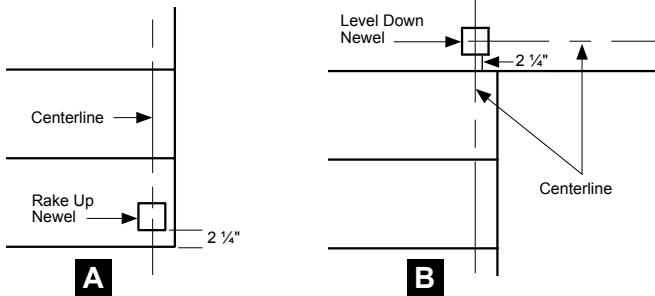
Wax paper
 1 1/2" Wood Screws
 1/2" Wood Plugs
 3/4" Forstner Bit
 Hack Saw
 Safety Glasses

Optional Items:
 LJ-3085 Insert-Runner
 Metal Cutting Chop Saw

Place and Mount the Rake Newels:

Refer to the above table for placement of newels. We recommend using our LJ-3004-3.5 Newel Mounting Kit to mount each newel post.

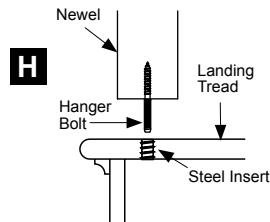
1. Mark the placement of the Newels on the rake centerline. The face of the Rake Up Newel must be exactly 2 1/4" from the front edge of the bottom tread (**A**). The face of Level Down Newel on the landing at the top of the each flight must be exactly 2 1/4" from the front edge of the landing tread (**B**).
2. Follow the LJ-3004-3.5 Newel Mounting Kit instructions to drive the steel insert into the treads and install the hanger bolt into each newel (**C**).
3. Mount each newel by threading the newel hanger bolt into the steel insert on the tread (**E**). Placing wax paper under the newel may help prevent marring the tread as the newel is tightened down. Trim away the excess wax paper once the position of the newel is permanently set.
5. The distance between the Rake Up Newel and Level Down Newel should not exceed 48". If the distance is greater than 48", a Rake Center Newel must be installed at 48" maximum intervals between the mounted newels (**F**). Mount each Rake Center Newel on the centerline making sure the face of the newel is exactly 2 1/4" from the front edge of the tread.


Place and Mount the Level Newels:

Refer to the table at the top of this page for placement of newels. We recommend using our LJ-3004-3.5 Newel Mounting Kit to mount each newel post.

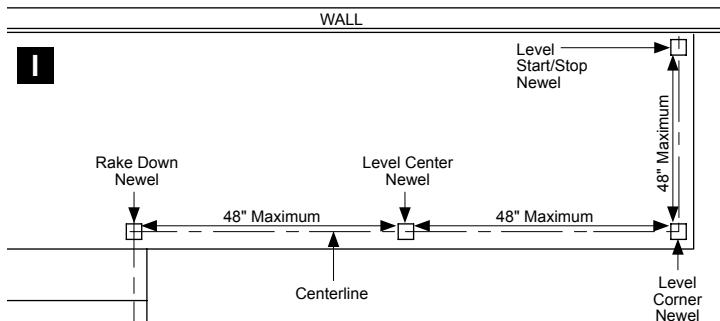
1. Follow the LJ-3004-3.5 Newel Mounting Kit instructions to drive the steel insert into the treads and install the hanger bolt into each newel (**G**).

2. Mount the Level Stop Newel on the level run centerline at the end of the level run by threading the newel hanger bolt into the steel insert on the tread (H). Placing wax paper under the newel may help prevent marring the tread as the newel is tightened down. Trim away the excess wax paper once the position of the newel is permanently set.



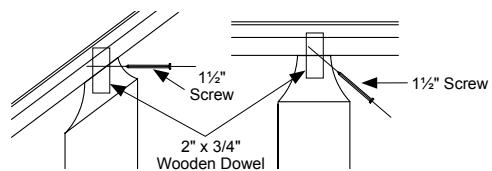
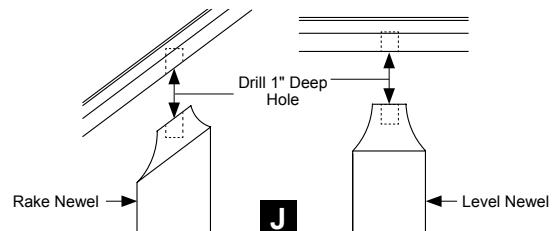
3. Mount a Level Corner Newel at each level run corner in the same manner as 2. above (H).

4. The distance between the newels should not exceed 48". If the distance is greater than 48", a Level Center Newel must be installed at 48" maximum intervals between the installed Level Newels. Mount each Level Pass Through Newel on the centerline (I).



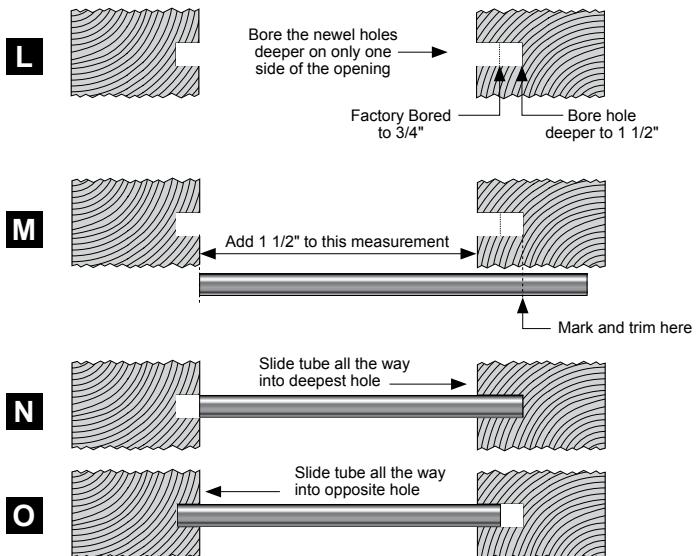
Install the Handrail onto the Newels:

1. Drill a hole 25/32" x 1" deep centered on the top of each newel to accept the provided 2" x 3/4" wooden dowel (J).
2. Using construction adhesive, install the wooden dowel into the hole on the top of each newel.
3. Trim the 684 handrail to length for each run. Utilize handrail fittings for making turns or changes in elevation (if desired).
4. Drill the bottom of the handrail to accept the wooden dowel previously installed in each newel (J).
5. Using construction adhesive, place the handrail onto the newel dowels. Secure the handrail in place by installing 1½" screws through the newels into the handrail bottom. Plug the holes (K).



Install the Tube Infill:

1. The factory pre-bored holes in the newels are 3/4" deep. In order to install the stainless tube, the holes in one newel of each opening must be drilled deeper to 1 1/2" (L). We recommend using a 3/4" Forstner bit making sure the hole shape and size on the surface of the newel is not altered in any way as the the hole is bored deeper.
2. Measure the opening between the newels and add 1 1/2".
3. Transfer that measurement to the tube. Mark and cut the tube using a hack saw (M).
4. Place adhesive deep into the bored hole in each newel of the opening. Slide the tube all the way into the deepest hole being sure to make contact with the adhesive (N). Then line up the opposite end of the tube to the corresponding hole in the newel at the other end of the opening and slide the tube all the way into the hole (O).



35280 Scio-Bowerston Road • Bowerston, OH 44695
740-269-2221 • (Fax) 740-269-9047
www.LJSmith.com