



Knilling

# Perfection

planetary pegs  
for violin, viola & cello

## 12-Step Installation Guide

### CAUTION:

Installation and removal of the Perfection Pegs should be carried out by an experienced luthier. Before installation, please take time to study these instructions and understand them completely.

Incorrect installation may -

- Necessitate rebushing and/or repair of the peghole
- Cause the pegs to malfunction
- Void the warranty on the pegs

If you have any questions please contact Twofold Media.

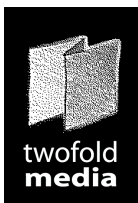
### PEG ACTION:

Perfection pegs use a variable-friction mechanism to hold their internal gears in position against the tension of the tuned string. In normal use, the degree of friction applied is controlled by the player exerting a light inward pressure on the peg head as a string is tuned. Friction is increased by pressing the peg head inwards as it is rotated, and can be released to let the peg turn more freely by pulling the peg head gently outwards during rotation.\*

### \* DO NOT FORCE YOUR PEGS

The application of excessive force pressing in or pulling out on the peg head while tuning can dislodge the peg from the peg box.

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### IMPORTANT: Before you install

There are two types of Perfection peg in each set: pegs for the treble-side of the instrument and pegs for the bass-side. The two types are NOT interchangeable. If a peg is installed on the wrong side of an instrument it may not function properly.

The pegs have a fine thread on the shank. Treble-side pegs have a left-hand thread, while the bass-side pegs have a right-hand thread.

The pegs are installed on the instrument by screwing them into the peg holes. The direction of rotation when screwing the pegs is the same direction used when loosening the strings.

To determine which way the threads are cut, carefully examine the pegs and run your thumbnail along the threads to determine the correct orientation.

The pegs are supplied in a uniform length and must be measured and trimmed to fit your instrument.

### Tools & materials required

- Perfection Pegs
- Peg reamer - standard profile
- Marking pen
- Saw - fine tooth
- File - fine-tooth, or belt sander
- Sandpaper - very fine (P220 grade/600 grit)
- Leather patch
- Cotton buds
- Water
- Polyurethane glue (eg. Selleys Urethane Bond)

### Steps 1 & 2 - Reaming the peg hole

#### Step 1 - Preparation

Prepare the instrument by removing the old strings and pegs.

#### Step 2 - Ream the holes

Use a standard peg reamer to lightly ream the four peg holes. Ream only enough to allow the pegs to self-thread very tightly.



### Steps 3 to 8 - Cutting the peg to length

#### Step 3 - Initial fit

Select the correct peg for the side of the instrument on which you are working (see "IMPORTANT: Before you install"). Screw the peg into the peg hole until no thread is visible.



#### Step 4 - Mark the peg length

Mark the peg where it protrudes from the peg box. Remove the peg from the peg box. Keep track of which peg is being prepared for which peg hole.



### Step 5 - Cut the peg to length plus 2mm

Trim the peg to length with a saw. Cut the peg end proud of the mark by 2mm to allow for rounding of the peg end.



### Step 6 - File the peg end

Round-off the peg end with a file or belt sander.



### Step 7 - Sand the end

Smooth-finish the peg end with very fine sandpaper.



### Step 8 - Shine the end

Shine the peg end using the leather patch.



## Steps 9 to 12 - Final Installation

### Step 9 - Moisten the peg hole

Using a cotton-bud, barely moisten the peg hole with water.



### Step 10 - Apply glue to the thread

Apply a bead of polyurethane glue (such as Selleys Urethane Bond) to the threaded contact area.



### Step 11 - Screw the peg into the hole

Screw the peg in until the threads are flush with the peg box\*. The direction of rotation when installing the pegs is the same direction used when loosening the strings. The fit should be close enough for the final turns to be very tight.

As considerable force needs to be used to complete the last few turns, you can wind a rubber band around the shank to act as a grip so that sufficient torque can be applied to the pegs when screwing them into the peg box.

\* Because peg box width can vary widely, the depth of insertion of the threaded portion of the peg may have to be adjusted to ensure the opposite ends of the pegs are flush with the opposite cheeks of the peg box.



### Step 12 - Clean up & let dry

Wipe off any excess glue. Allow the glue to dry completely before installing strings.

