

# Truss-Rod



The neck of your guitar undergoes a lot of stress from the tension of the strings. The stress gets worse if you tune to open E or open G, or if you increase the gauge of your guitar strings. The stress reduces if you drop-tune, change to lighter gauge strings or de-string entirely for cleaning and maintenance. Add to that the natural tendency of wood to react in varying ways to climatic changes and it's easy to see why early electric guitar necks were prone to bowing and twisting. So it wasn't long before metal rods were inserted to resist these forces and assist the neck in staying true and today all guitars are fitted with adjustable truss-rods.

To check if your neck is straight and true simply sight down the neck from the headstock end followed by a similar inspection from the bridge end. Tilt the guitar backwards and forwards slightly so you can use the frets themselves as a guide to the straightness of the neck. The neck should be either perfectly straight or have a slight forward bow. This varies from guitar to guitar. If the neck is perfectly straight and there is no fret-buzz whilst playing, then all is fine. If there is fret-buzz in evidence then a slight forward bow is desirable. This gives the string ample space to vibrate along its stopped length and produce the desired note without making accidental contact with other frets.

If you decide the truss-rod needs adjustment it's always best to take the guitar to an expert guitar tech who can confirm your diagnosis and perform the adjustments necessary. The guitar tech will tighten the truss rod to reduce the forward bow or loosen it to allow the string to pull the neck further forward. In any event the changes will be carried out very gradually and the neck will be allowed time to settle in between each small adjustment.

## Adjusting your truss-rod

A guitar's truss rod consists of one or two metal rods that are embedded into the neck. Although an adjustment will affect the guitar's action, its primary purpose is to set the neck's relief, meaning whether the neck is straight or has a varying degree of forward or backward bow. If the neck already has the desired amount of relief, then the truss rod is not the place to adjust any action issues.

If your guitar has a single-action truss rod, then you'll only have control over the amount of backward bow, with any forward movement either being built into the design of the neck or occurring from the pull of the strings. Many contemporary guitars use a double-action truss rod, which allows adjustment in both directions. Cranking clockwise will yield less relief, while loosening the truss rod counter clockwise will result in more relief.

In most cases, some neck relief is desirable to prevent buzz. Truss rod adjustments can be a delicate matter and most adjustments should be made in small increments of quarter turns and no more than a full turn. You can damage a neck with just a little too much of a turn, so if you have any doubts, don't do it. You're better off seeking the advice of a pro.

