Setting Up Your Electric Guitar

Figure 1

When buying a new electric guitar you'd probably think that it would be in top-notch playing condition as soon as you pull it out of the box. The fact that your new guitar is made of wood…..and wood moves! Temperature and humidity both effect wood and by the time your guitar gets to you it may need a minor adjustment or two. Additionally, as your guitar ages, you may have to perform periodic adjustments in order to keep your guitar in good playing condition. This is normal for all guitars.

Figure 2

The following tips concern general, basic set-up…however, if you are not sure of what is being described here or are not sure of your capability to carry out the instructions, do yourself a favor and take your axe to a qualified guitar technician.

ADJUSTING THE TRUSS ROD:

Figure 3

All electric guitars have an adjustable metal truss rod that runs down the center of the neck. (Figure 1)

The truss rod adjustment can be both simple and complex at the same time. On the simple side, a minor adjustment to straighten a neck with too much concave bow or to relieve a convex bow is possibly all that is needed to make a dramatic improvement to your guitars playability. On the complex side, adjusting the rod alters other aspects of the set-up such as overall action, string height and intonation…..and YOU CAN DAMAGE YOUR GUITAR PERMANENTLY IF THE ADJUSTMENT IS NOT MADE CORRECTLY. If you feel confident that you can make this adjustment…read on.

Figure 4

- Place a capo at the first fret. (Figure 2)
- Press the low E string down at the 17th fret. (Figure 2)
- Look for a small gap of (approximately .010" or 0.25mm) between the top of the 7-9th fret and the underside of the string. (Figure 2)
- If there is too much gap, the truss rod needs to be turned clockwise. (Figure 3)
- If there is not enough gap, the truss rod needs to be turned counter clockwise. (Figure 3)

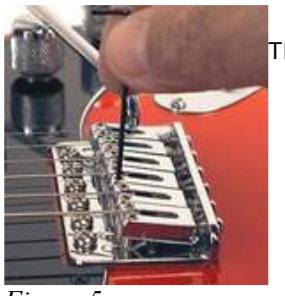

Figure 5

TIPS:

- Never force the adjustment if it feels tight.
- Make any adjustment in very small degrees at a time.
- Let the neck "settle" between adjustments.
- If you are not clear on these instructions, take your guitar to a qualified technician.

SETTING THE ACTION/STRING HEIGHT:

Once you are sure your truss rod has been adjusted properly, you will want to adjust the action or string height to insure the best playability. String height is measured at the 12th fret.

- Using a steel ruler, measure the action on the top and bottom strings. (Figure 4)
- Adjust the bottom string (low E) to 2.00mm and the top string

Figure 6

(high E) to 1.5mm by raising or lowering the saddle. (Figure 5)

- Set the middle strings by gradually increasing the height from treble to bass side. (Figure 5)

Figure 7

SETTING INTONATION:
Most electric guitars provide individual string length adjustment for setting intonation. Fine tuning this length insures that your guitar plays in tune all the way up and down the neck.

- Using an electronic tuner, tune your guitar to pitch.
- One string at a time, play the harmonic at the 12th fret (Figure 6) and then play the fretted 12th fret note.
- If the fretted note is sharper than the harmonic, increase the string length slightly until both notes register the same on your tuner. (Figure 7)
- If the fretted note is flat compared to the harmonic shorten the string length slightly until both notes register the same on your tuner. (Figure 7)
- Repeat the procedure on all strings until the harmonic and the fretted notes are the same.

Figure 8

SETTING PICK-UP HEIGHT.
Pick-up height can greatly effect your guitars output. The closer to the strings the pick-up is, the more output you will get but….if the pick-up is too close the strings, problems can occur with magnetic pull.

- Fret the outer strings (one at a time) at the top fret. (Figure 8)
- Measure the distance from the top of the pick-up to the underside of the string. (Figure 8)
- Adjust so there is between 2.5mm and 3.00mm. (Figure 9)

Figure 9

And there you have it! In theory the actions described above are simple but in reality they can be very tricky. We suggests that your first attempt at these operations be made in the presence of someone who has done them before to insure you don't make an instrument altering mistake.