

# MAINTENANCE AND ADJUSTMENT PROCEDURES FOR CARVIN GUITARS

## ■ STRINGS

Your Carvin guitar is equipped with a high quality set of Carvin strings. For replacement strings, please order from our catalog. If you change to considerably lighter or heavier strings, you may need to adjust the truss rod in the neck to maintain good string action. For long string life, keep the strings clean with a soft dry cloth. Replace strings regularly to avoid dead strings which can cause intonation problems.

## ■ 2-WAY TRUSS ROD ADJUSTMENT

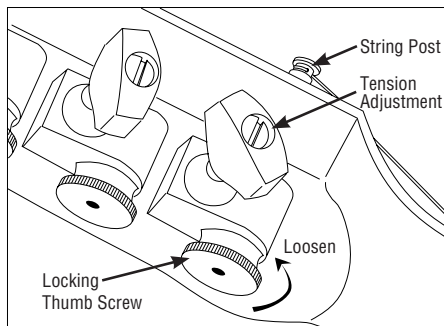
Carvin guitars come with a 2-way adjustable truss rod, allowing you to add the proper amount of forward bow, even to a neck with an excessive reverse bow condition. You can check the neck yourself for the proper amount of forward bow. You will need a straightedge about 18" long and a feeler gauge set. Tune the guitar to the proper pitch and place the straightedge edgewise on the center of the fingerboard so that it is resting on the first and last fret. Now take the feeler gauge set and check for clearance at the 7th fret. Viewing from the tip of the headstock (with the frets facing away from you), the truss rod nut must be turned left (counter clockwise) if there is less than .005" clearance at the 7th fret. If more than .015" clearance, the truss rod nut must be turned clockwise. The optimum forward bow is .010". Turning the nut to the right (clockwise) will reduce the amount of forward bow. To make adjustments use the 4mm hex wrench provided with your guitar. A 5/32" hex wrench will also work. Turn the nut 1/10 of a turn and recheck. Do Not force or over tighten the truss rod!

Note: If you have just received your Carvin guitar and the string action is very low with buzzing frets, then chances are the neck needs adjusting because of a backbowed condition sometimes caused during shipping. If this is the case then remove the truss rod cover with a small phillips screwdriver. Turn the truss rod counter clockwise until you have .010" forward bow. This is about the thickness of a playing card.

If you don't have a straightedge or feeler gauge set, you can achieve great results by pressing one of your outside strings down at the first fret and 24th fret and having a friend slide a playing card between the 7th fret and the bottom of the string. The card should slide under without lifting the string up. Adjust the truss rod accordingly.

## ■ CHANGING STRINGS WITH SPERZELS

- Loosen strings completely by turning the tuning buttons on the Sperzel machine heads.
- Loosen the string lock thumb screws counter clockwise on the back of the Sperzel gears. You only need to turn these screws about 2 or 3 turns.
- To remove strings, pull strings out of the string post holes.
- To install strings, slide string through the small hole in the Sperzel string post. Take up all the slack then tighten the thumb screw on the back. Cut off the excess string and then tune your guitar.



Stretch your new strings by pulling sideways on them fairly hard and retune.

## ■ TIPS FOR SPERZEL TUNERS

- If your guitar has a tremolo, don't rest palm on tremolo while tuning.
- When stringing up Sperzel tuners, do not wrap multiple string wraps around the post. Eliminate as many wraps as possible to keep your guitar in better tune. 3/4 of one turn around the string post should be considered maximum.
- You can adjust the tension of the Sperzel tuning keys with a small slot head screwdriver. Just tighten or loosen the screw on the end of the button until the desired tension is obtained. To eliminate any backlash, adjust the buttons fairly tight. This will give your tuning buttons a more secure feel, and will not hurt the longevity of the internal gears.

## ■ BRIDGE HIGHT ADJUSTMENT

Each Carvin guitar is set for best possible playing action for the average guitarist. Guitarists with a light playing style can possibly lower the action slightly. All guitarists with a hard playing style will probably have to raise the action slightly.

FT6 Hardtail Bridge: Each saddle can be adjusted individually for height with a 1.5mm hex wrench.

M-style Tune-O-Matic bridge: Adjust the bridge height with the proper size screwdriver. Recommended slot size .250 wide x .055 wide.

## ■ ADJUSTING INTONATION

Use your guitar tuner to fine tune your intonation. With the aid of your electronic tuner, tune each string to the proper pitch. Now check your high E string tuning at the 12th fret. If the tuner shows sharp, then adjust the high E bridge saddle slightly further away from the neck. If the tuner shows flat, adjust the saddle towards the neck. Try moving the saddle 1/32" (about the thickness of a dime). Retune the open E string perfectly and recheck the octave tuning at the 12th fret. If the tuning is perfect, you are done intonating the high E string. If it is still sharp, then keep moving the string saddle further away from the neck until your intonation is perfect. Repeat this procedure for each string. Use a #1 phillips screwdriver.

## ■ ADJUSTING PICKUP HEIGHT

Each pickup has 2 or 3 height adjusting screws. For maximum power output keep the pickups adjusted as close to the strings as possible while maintaining enough clearance so that the pickup pole pieces will not touch the strings

when playing on the upper frets. If you want a mellower sound, then adjust the pickups further away from the strings. For humbucking pickups we recommend 5/32" clearance. For single coil pickups go with 1/8" clearance.

## ■ ADJUSTING INDIVIDUAL PICKUP POLES

We set each magnetic screw head in both pickups for a balanced sound. If you wish to raise or lower the output of a certain string, then lower or raise the adjustable screw heads until you get the desired power output of that string. Press strings down on the 24th fret and make sure that you have at least 1/16" clearance between the strings and the pickup screw heads, otherwise you may get static as a result. Keep the pickup pole pieces clean as any metallic particles on them can cause static.

## ■ CLEANING AND POLISHING

For all Carvin guitars with a gloss finish, use any good quality automobile wax or guitar polish. To avoid scratching the finish use a clean soft cloth. Do not get wax on the ebony fingerboard.

For Carvin guitars with the natural tung oil finish, apply a good furniture oil such as "Old English" lemon oil and wipe off the excess. This should be done at least twice a year.

The ebony fingerboard should also be oiled with lemon oil twice a year. Do this while the strings are off the guitar. The oil will prevent the fingerboard from receiving or losing excess moisture, which may cause the wood to crack.

## WARNING

- Your guitar is constructed of solid wood that was seasoned and dried to specific moisture requirements.
- If you live in a desert, high mountain or a cold winter region, you will experience dry and extreme weather conditions from time to time, which can crack your fingerboard and in severe cases, crack other parts of your guitar and the finish. You can prevent cracking by storing your guitar in its case and by not subjecting it to extreme heat or cold.
- If you live in humid regions such as the Southeastern United States, or near the ocean, you should take extra precautions and keep your instrument in its case or gig bag as much as possible.
- Do not leave your guitar and case in direct sunlight or in your car when it is hot. Heat inside a car's trunk can exceed 130°. Heat build-up inside the case can become intense and damage the instrument.
- When the instrument is not in use or when shipping, do not release the tension of the strings, as this is harmful to the neck and may cause an irreversible backbow.
- Carvin does not warranty cracks or neck warpage due to extreme weather conditions, improper storage or misuse.

# CARVIN