

Kahler[®]

MADE IN USA

Double Locking Tremolo Installation & Adjustment Instructions

The procedure for installing your new Kahler Tremolo System will be as follows:

Section 1- Installation of the String Lock/Nut Lock

Section 2- Installation of the Bridge

Section 3- System Set-up and Adjustment

Section 1- Installation of the String Lock/Nut Lock

Your Kahler Tremolo System is supplied with either a "Behind the Nut" String Lock assembly, or a Nut Lock assembly.

Part A - "Behind the Nut" String Lock Assemblies

Note: Mount the String Lock as close as possible to the guitar's nut.

Step 1 - If you have a Deluxe String Lock, disassemble the locking levers by raising the levers up and unscrewing the retaining pin from the side of the assembly. With the pin and levers removed, you will have access to all four holes through which the mounting screws pass.

Step 2 - If you have a bullet type truss rod projecting from your headstock, replace it with a Kahler bullet replacement (sold separately).

Step 3 - Detach the strings from the tuning pegs, and set the String Lock loosely on the headstock behind the nut, but as close to the nut as possible.

Step 4 - Re-attach the two outside guitar strings (high E and low E) by passing them over the nut, passing them through the String Lock and attaching them to the tuners. Wind a slight amount of tension on them from the tuners.

Step 5 - Ideally, the strings should be holding the String Lock approximately 1/16th of an inch above the surface of the headstock. If this distance is greater, a shim is needed to support the String Lock. If the String Lock is touching the surface of the headstock, slide it away from the nut until it rises slightly off the surface. This is the best location for the String Lock, because when it is screwed down, it will pull the strings down snugly into the nut slots. It will also be close to the nut, which eliminates potential tuning problems.

Step 6 - Firmly hold the String Lock in position and carefully drill through one of the four mounting holes with a 1/16th inch diameter drill bit. (Be careful not to drill through the headstock!)

Step 7 - Install a mounting screw into the one hole and tighten the String Lock snugly into place.

Step 8 - Drill the remaining three holes, again being careful not to drill through the headstock.

Step 9 - Install the remaining three mounting screws.

Step 10 - If you have a Deluxe String Lock, replace the three locking levers, and screw in the lever pin which holds them in place.

Part B - Nut Lock Assembly

Note: The installation of the Nut Lock Assembly requires precise woodworking experience and woodworking tools. If you do not have both of these requirements, it is recommended that you have a qualified repairman perform this installation. The following installation steps assume that you have the above mentioned requirements, and therefore, the descriptions of woodworking procedures are not highly detailed.

Step 1 - Remove the four inside strings from the guitar, leaving the two outside strings attached. Loosen the remaining two strings and spread them off the nut to each side of the neck.

Step 2 - Remove the nut from the fingerboard.

Step 3 - Cut a "shelf" for the Nut Lock Assembly which is about 1/8th of an inch below the fingerboard and has a floor which is parallel to the fingerboard. The back wall of the shelf must be flush with the end of the fingerboard.

Step 4 - Disassemble the Nut Lock Assembly and place the Nut Lock Base onto the shelf.

Step 5 - Re-locate the two remaining guitar strings and tune them to full tension.

Step 6 - Inspect the height of the strings above the first fret. Then fret the strings at the first fret and inspect the strings' height above the second fret. Your goal is to make the strings' height in these two conditions the same. Do so by either cutting the shelf deeper to lower the strings coming off the nut, or shim the Nut Lock Base with combinations of the supplied shims to elevate the strings' height coming off the nut. The shims are to be positioned under the outer edges of the Nut Lock Base. Different numbers of shims can be used under opposite ends of the Nut Lock Base to get accurate height settings for both outside strings.

Step 7 - Install the Small Nut Lock Mounting Screws through the small recessed holes in the top of the Nut Lock base. Install the large Nut Lock Mounting Screws through the large recessed holes in the top of the Nut Lock base. Nut Lock Mounting Bolts may be used instead of the Large Nut Lock Mounting Screws. If the Bolts are to be used, drill through the neck from the back and insert the bolts through the neck and into the bottom of the Large Recessed holes in the Nut Lock Base.

Step 8 - With the Nut Lock Base secured in position, attach the String Director onto the rear edge of the Nut Lock Base using the other two small mounting screws which will pass through the Nut Lock Base, and drive them into

the wood of the guitar neck. Be sure the String Director is positioned so that "Kahler" is near the bass side and "Pat.Pend." is near the treble side.

Step 9 - Reassemble the Lock Down Tabs and Bolts.

Step 10 - During the final set-up of your guitar (following bridge installation), check the height of the Nut Lock Assembly by performing Step 6 on all six guitar strings. If any one string is too low, raise it up by stacking an additional shim beneath the end of the Nut Lock Base closest to the low string. This may be done easily by loosening the mounting screws or bolts (you do not need to remove them) and sliding a shim underneath the appropriate end of the Nut Lock Base.

Section 2 - Installation of the Bridge

Note: These installation steps describe the installation of the 2710 Tremolo as a replacement for a traditional Strat-type fulcrum tremolo.

Step 1 - Remove strings, old bridge, mounting screws, tension springs, claws and claw mounting screws (we recommend replacing your old claw and springs with new Kahler parts).

Step 2 - Check spacing of the two outside bridge mounting holes and confirm that they are the standard width apart (2.2" or approx. 2 3/16"). (Note: if your mounting hole spacing is non-standard, it may be necessary for you to plug your existing holes and re-drill two new holes in the proper location. If this becomes necessary, be sure to consult with an experienced guitar technician).

Step 3 - Drill out the outside two of the six holes, which the old Strat-type tremolo's mounting screws went into. Using a "Size I" (.272" diameter) bit, drill these two outside holes at least 1 1/8 inch deep. Pound in the Kahler mounting screw inserts, and install the Kahler mounting screws.

Step 4 - Turn guitar over to back side and re-fit new claw using screws supplied.

Step 5 - Put a bit of thick grease in each of the Kahler Tremolo hinge point notches, and place the tremolo in position. These are the notches where the head of the mounting screws contact the tremolo. **NOTE:** This lubrication is critical for achieving maximum tuning stability.

Step 6 - While holding bridge securely in place, turn guitar over to back side and attach springs.

Step 7 - Having installed bridge and springs, check to make sure bridge is seated properly in fulcrum points.

Step 8 - At this point, if you have NOT installed your String Lock, refer to STRING LOCK INSTALLATION INSTRUCTIONS and install String Lock before proceeding to step 9. If you HAVE installed it, proceed directly to step 9.

Step 9 - At the bridge end, turning the long String Lock Screws will back up the saddles' internal lock member called the Piston. Back the Pistons up until their tips disappear from sight at the front notched ends of the Saddle Levers.

Step 10 - Insert the strings through the holes in the back of the String Lock Screws. The strings will pop up out of the front of the Saddle Levers. If you encounter resistance, twist or spindle the string as you push it through by "rolling" the string at its ball end.

Step 11 - Feed the strings through to the tuners and approximately tune the guitar.

Step 12 - Adjust the spring tension on the tremolo by tightening or loosening the claw mounting screws. After each adjustment of the screws, re-tune the guitar. The tremolo should rest approximately parallel to the surface of the top of the guitar.

Section 3 - System Set-up and Adjustment

Step 1 - Loosen the six Saddle Lock Down Screws one turn each. These screws may be accessed from the back of the guitar.

Step 2 - Slide the Saddle Modules from side to side to align the strings with the neck and pickups. Keep the Saddle Modules straight on the tremolo.

Step 3 - Set the string heights of the two outside strings by adjusting the tremolo mounting screws. [Note: The two outer Saddle Modules do not have their own height screws. The only way to adjust the string height for

the outside strings is by turning the tremolo mounting screws which go into the guitar body]. After first setting the outside string heights with the mounting screws, then set the heights of the four inside strings by inserting the small allen wrench through the oval slots found in the recess in the front of the Saddle Levers. On the four inside Saddle Modules, there are two adjustment slots for each Saddle Lever, and there is a small allen screw beneath each oval slot. Turn the two screws for a particular Saddle Module equal amounts to raise or lower that Module. Carefully inspect the string clearances over the fingerboard for consistency of height and playability. **Caution:** Do not attempt to raise the Saddle Module's Height Screws without first loosening the Lock Down Screws as mentioned above in Step 1, as damage may result.

Step 4 - Adjust the saddle intonation by turning the Intonation Screw with an allen wrench. After each adjustment, check the tuning of the string and the consistency of the tuning at difference points on the fretboard with an electronic tuner.

Step 5 - When the string spacing, Saddle Module height and intonation are set, lock down the Saddle Modules by tightening the Saddle Lock Down Screws. Do so by grasping the small end of the appropriate allen wrench and sticking the long end down into the Lock Down Screw head from the back of the guitar.

Step 6 - Stretch the guitar strings by tugging them gently and re-tune the guitar.

Step 7 - Tighten the String Lock Screws at the rear of the Saddle Modules one at a time, re-tuning each string after it is locked.

Step 8 - Lock the String Lock or Nut Lock.

Step 9 - Re-check tuning and adjust if necessary with the Fine Tuner Screws.



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P.O. Box 9305
Anaheim, California 92802

