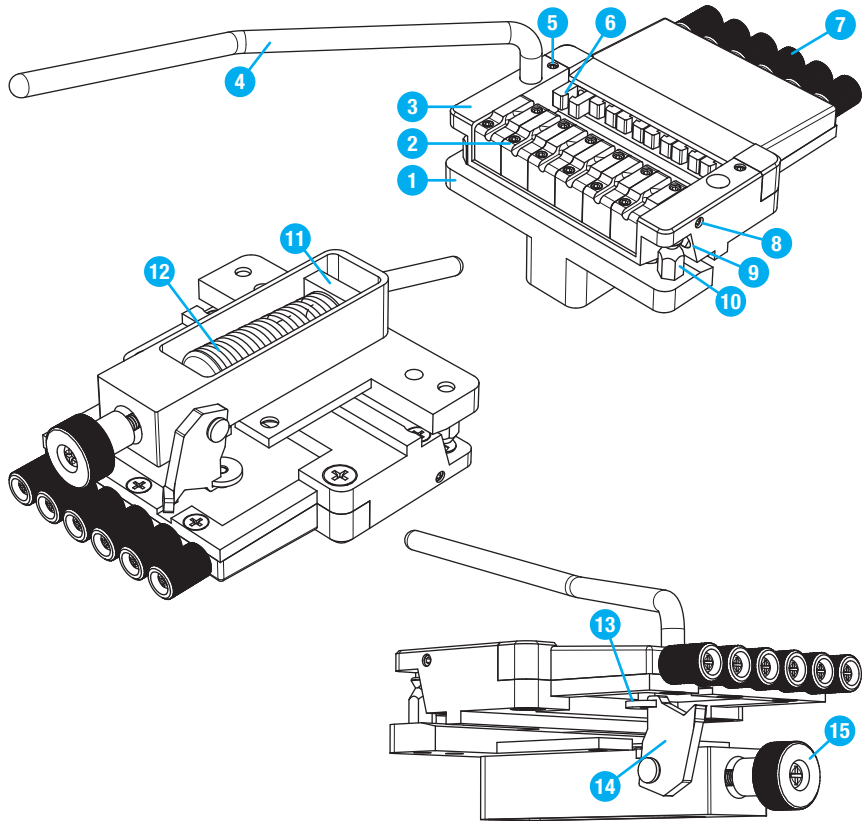


# R-TREM

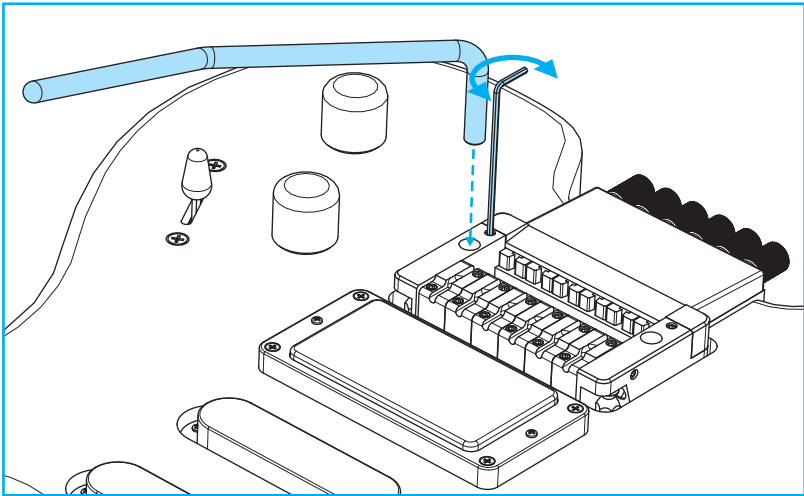
## USER & INSTALLATION GUIDE

### Overview



Pos.	Name	Function
1	Base plate	For mounting the R-Trem on the instrument. Holds the pivot block and contains the spring compartment.
2	Saddles	Guide the strings, height and position is adjustable.
3	Pivot block	The moving part of the tremolo, contains saddles and the tuner assembly (tuning screws and jaws).
4	Tremolo arm	For... well... you know what a whammy bar is :-)
5	Arm friction adjustment	Grub screw, allows friction adjustment for the tremolo arm.
6	String jaws	Holds the ball ends of the strings.
7	Tuning knobs	For tuning the strings by moving the jaws back and forth.
8	Saddle clamp	Grub screw, locks the saddles in place after setup is finished.
9	Knife edges	Two different knife edges (a straight and a curved one) are the contact points of the pivot block to the pivot posts on the base plate.
10	Pivot posts	The static supporting point for the pivot block, mounted on the base plate.
11	Spring tab	Part of the pivot block, holds the front end of the spring.
12	Spring	Spring, counteracting the string pull on the pivot block.
13	Locking disk	Mounted on the pivot block, allows the locking lever to grip and lock the pivot block, switching to “fixed bridge mode”.
14	Locking lever	Locks and unlocks the pivot block.
15	Master tuning knob	For adjusting the compression of the spring, which balances the pivot block in zero position depending on the string pull.

### Mounting the tremolo arm



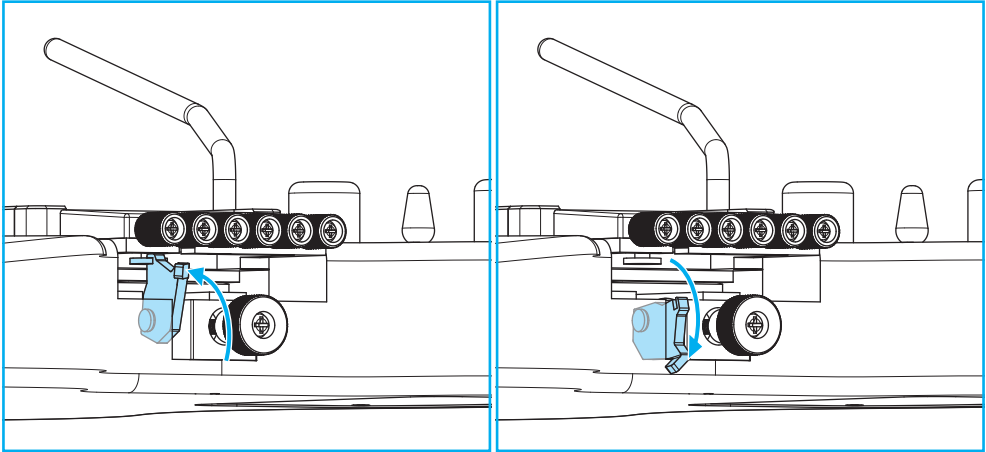
- 1 Insert the tremolo arm into the corresponding opening on the pivot block.
- 2 Use a 1.5 mm hex key to adjust the friction of the tremolo arm. Some friction is required to prevent the tremolo arm from falling out of the pivot block while playing the guitar.

### Locking and unlocking the tremolo

The R-Trem can be used in a floating mode (just like any other tremolo), but can additionally be locked in a neutral zero position to be used as a fixed bridge. This is extremely helpful, e.g., in case of a broken string, to continue playing without the guitar going out of tune.

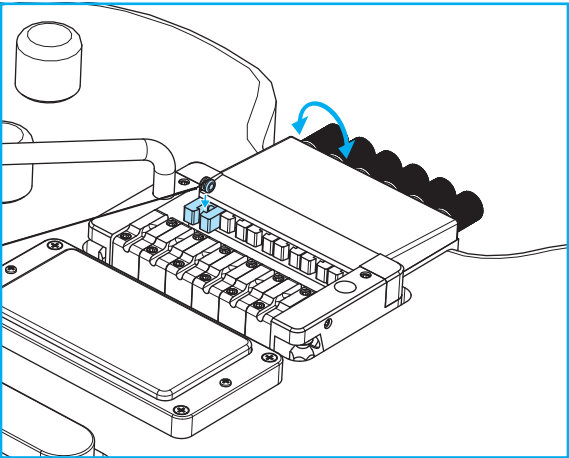
**As a rule: always lock the tremolo for any tuning or setup on the guitar!**

This is necessary to define a zero position of the pivot block, in which locking and unlocking the tremolo can be done without any (audible) change in tuning.



- 1 If the strings are not yet installed or the spring tension is not yet correctly adjusted, use the tremolo arm to move the pivot block into a horizontal position.
- 2 **To lock the tremolo:** flip the lever up, so that it tightly grips the locking disk on the underside of the pivot block.
- 3 **To unlock the tremolo:** flip the lever down, so that the pivot block moves freely up and down.

### Inserting and tuning up strings

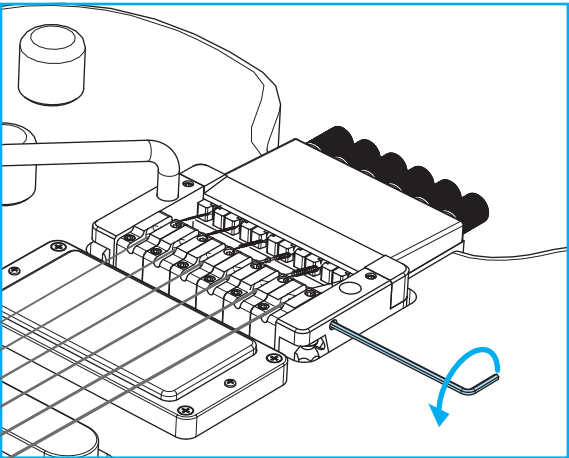


- 1 **Lock the tremolo** before inserting or tuning strings.
- 2 Turn the tuning knob counterclockwise, until the jaw has moved out of the tuner housing far enough to insert the ball end of the string.
- 3 Guide the string over the saddle and insert the ball end vertically in the opening of the jaw. Hold a fingertip on that ball end to prevent it from slipping out again, until the jaw is back in the tuner housing.
- 4 Turn the tuning knob clockwise, until the jaw has moved back far enough to safely hold the ball end. Turn the tuning knob further to tune the string. If you go too far, simply turn the knob counterclockwise to loosen the string to pitch.
- 5 Continue with inserting the other strings. If the tremolo has been set up before (action, intonation), you can tune up each string to pitch. Otherwise continue with the basic setup, before doing the final tuning.

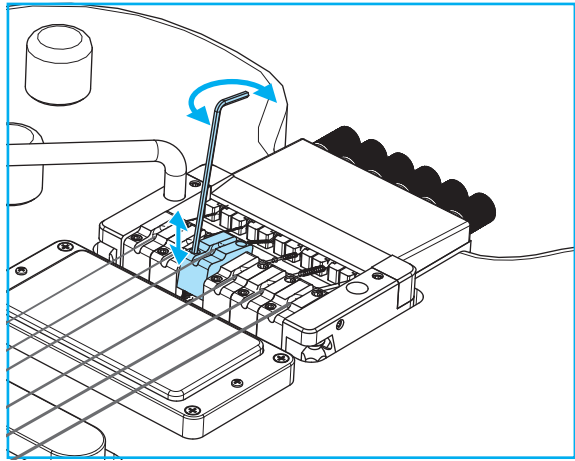
### Setting up action and intonation for each string

The saddles on the pivot block can be moved individually, back and forth as well as up and down. Even the angle of the saddle can be adjusted as desired, by adjusting the front and back screw differently. However, you should either keep the saddles parallel to the pivot block, or set them at an angle which equally divides the incoming and outgoing string angle. Setting the saddles at more extreme angles might give unwanted results.

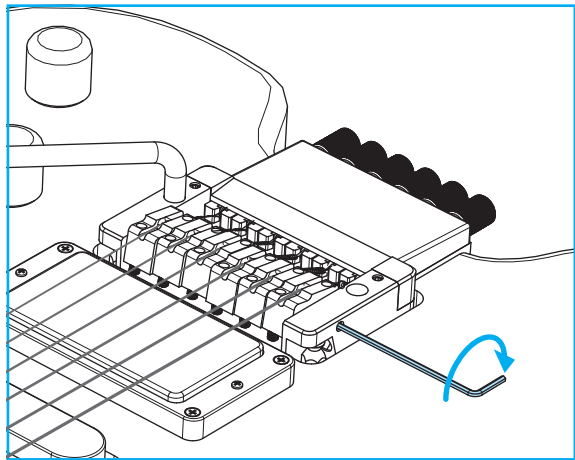
The saddles can be (and should be) locked in position for normal use of the tremolo, so they need to be unlocked before a setup can start.



- 1 Use a 1.5 mm hex key to loosen the saddle locking screw on the side of the pivot block. Some R-Trems have such saddle locking screws on both sides of the pivot block, to allow a precise centering of the saddles.



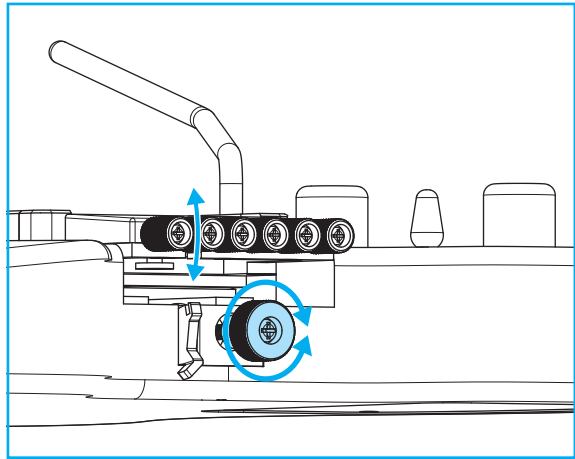
- 2 **Setting the action:** use the same 1.5 mm hex key to raise and lower each saddle as desired. For setting the action, the strings don't have to be in their exact pitch, an approximate tuning is sufficient.
- 3 Set the action on **all** saddles, before continuing with setting the intonation for those strings.
- 4 **Setting the intonation:** Use your fingers to push the saddles back and forth. Once the correct position is found, hold this saddle down with one finger while pushing the next (adjacent) saddle into position. This prevents the correctly positioned saddle from being moved inadvertently.



- 5 After finishing the setup for action and intonation, use the 1.5 mm hex key to lock all saddles in place again.
- 6 **Now tune all strings exactly to pitch**, before continuing with adjusting the spring tension.

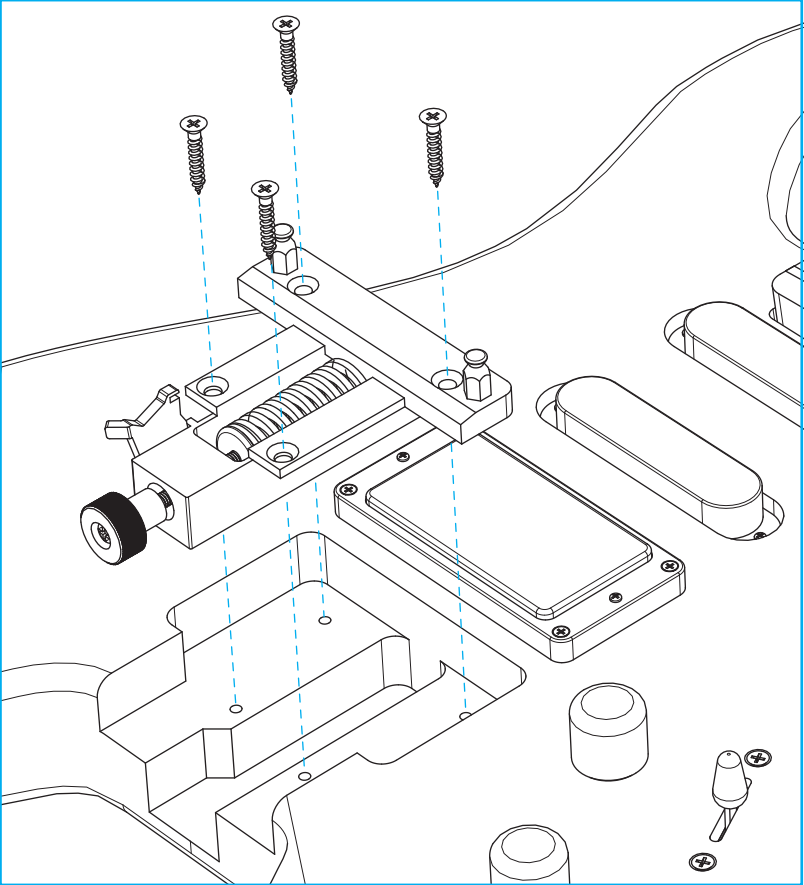
### Adjusting the spring tension with the master tuning knob

The spring, which is clamped between tremolo base plate and pivot block, is counteracting the string pull of the instrument. When you play the guitar, you expect the guitar to return into the floating “zero position” (which also means the correct tuning you have choosen) after using the whammy bar. To make that possible, the balance between spring (pushing) and string (pulling) forces must be correctly adjusted.

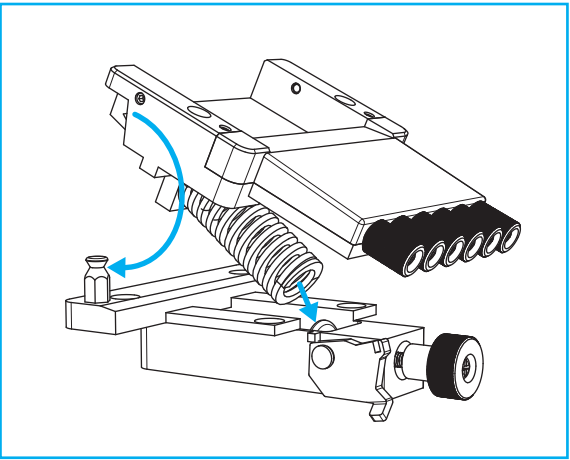


- 1 Unlock the tremolo by flipping the locking lever down. Depending on the currently set spring compression, the guitar will go out of tune immediately, either down (means the pivot block goes up) or up (the pivot block goes down).
- 2 Turn the master tuning knob clockwise to increase the spring tension (moves the pivot block down and turns the pitch up), or:
- 3 Turn the master tuning knob counterclockwise to decrease the spring tension (moves the pivot block up and turns the pitch down).
- 4 The spring tension is correctly adjusted, when the **locked and the unlocked positions are identical**, and you can lock/unlock without any noticeable change of pitch between both states.

### Installing the R-Trem

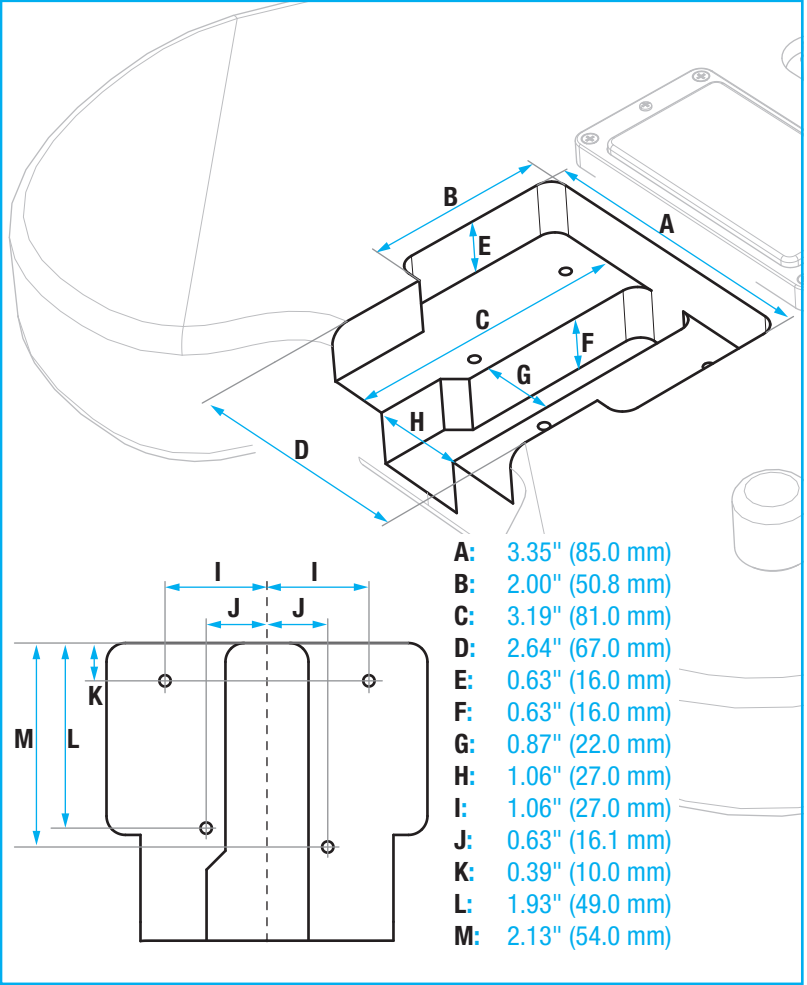


- 1 To install the R-Trem, mount the base plate with four wood screws in the corresponding opening on the guitar body. Tighten all screws to make sure the base plate is safely mounted.




- 2 Put the spring into the spring tab of the pivot block, and then push the other end of the spring over the spring holder plate in the spring compartment.
- 3 Push the pivot block a little bit back and down, so that both knife edges are correctly positioned in the grooves on the pivot posts.
- 4 Lift up the back of the pivot block and flip up the locking lever to lock the base in zero position for all following steps.

### R-Trem routing dimensions




(These dimensions have been taken on a Newburgh Steinberger GR4R)

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