



# ZR TREMOLO

The ZR Tremolo is a double locking tremolo featuring the Zero Point System that keeps the tremolo unit flat (at the zero point). This system eliminates the hassle of tuning, which is a shortcoming of a floating tremolo, providing a more comfortable playing experience. Furthermore, the supporting point is equipped with a high-precision built-in ball bearing, which realizes smooth arming.

## Attaching the tremolo arm

The tremolo arm is a plug-in type with a torque adjustment cap incorporated into the arm unit. Insert the tremolo arm into the arm socket of the base plate, and then tighten the torque adjustment cap (Fig. 1) to fix the tremolo arm in place. You can adjust the tremolo arm torque by tightening/loosening the torque adjustment cap. Turning the cap clockwise will tighten the arm torque, and turning it counterclockwise will loosen the arm torque.

## Adjusting tremolo angle and Zero Point System

The angle of the tremolo is adjusted by the balance between the tension of the strings and the zero point system installed on the back side of the guitar body. The ZR tremolo is designed so that by correctly adjusting the Zero Point System, the tremolo unit sits roughly parallel to the surface of the guitar body. This ensures optimal performance. Tuning is completed when the Zero Point System is adjusted to the correct position. If the tremolo is roughly parallel to the surface of the body, the stop rod contacts the tremolo block and the stopper.

To adjust the angle of the tremolo, turn the spring adjustment knob (Fig. 2 A) on the back side of the guitar. If the stop rod (Fig. 3 B) does not contact the stopper (Fig. 3 C) (or the tremolo is tilted forward) when the guitar is correctly tuned, turn the spring adjustment knob clockwise to tighten the spring. If the tremolo block (Fig. 3 D) does not contact the stop rod (or the tremolo is tilted backward), turn the spring adjustment knob counterclockwise to loosen the spring.

## Using as a floating tremolo (Zero Point System deactivated)

The ZR tremolo can also be used as a normal floating tremolo by deactivating the Zero Point System. While holding the arm up (with the tremolo block facing away from the stop rod), remove the stop rod (Fig. 3 B) and sub spring (Fig. 4 E). Adjust the angle of the tremolo that is in a floating state by adjusting the balance between the tension of the strings and the tension of the tremolo springs installed on the back side of the guitar body. Setting the tremolo so that it is approximately parallel to the surface of the guitar body will ensure optimal performance. To adjust the angle of the tremolo, turn the spring adjustment knob (Fig. 2 A) on the back side of the guitar. If the tremolo is tilted forward while the guitar correctly tuned, turn the spring adjustment knob clockwise to tighten the spring. If the tremolo is tilted backward, turn the spring adjustment knob counterclockwise to loosen the spring.

When adjusting the tremolo angle that is in a floating state, the balance between the tension of the strings and the tension of the tremolo springs changes each time the tension of the spring is adjusted. Thus, adjustments should affect tuning. Make adjustments by tuning the strings repeatedly.

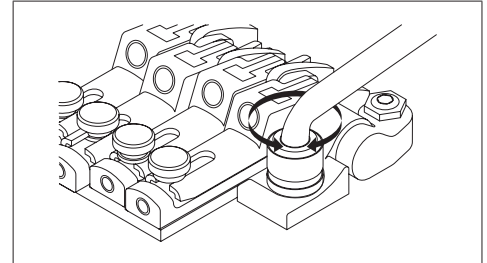


Fig. 1

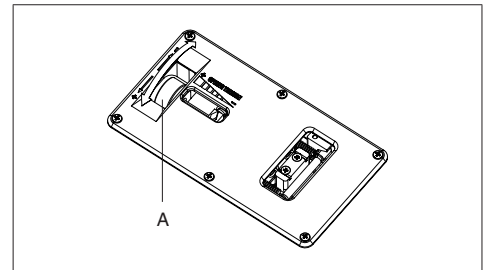


Fig. 2

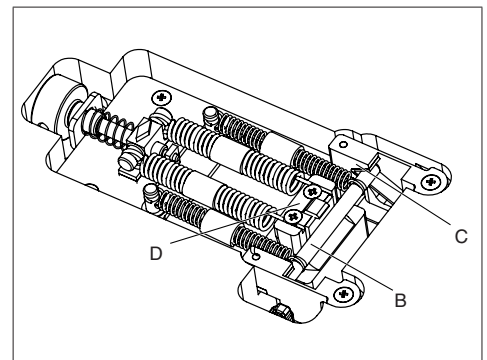


Fig. 3

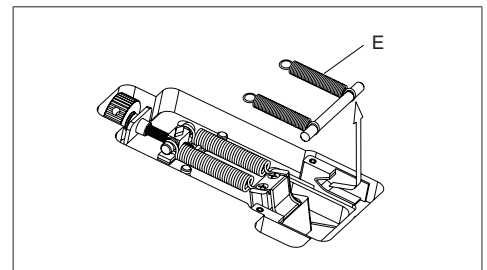


Fig. 4

## Adjusting the action

Adjust the height of the tremolo unit by turning the stud lock screws (Fig. 5 G) on either side of the tremolo unit with a 3 mm Allen wrench. Note that it is not possible to adjust the height of individual strings.

## Adjusting the intonation

Remove the intonation adjustment bolts (Fig. 6 K) housed in the bridge unit and tighten them in the screw holes at the rear of the saddle until the end of each bolt touches the wall of the bridge unit. Loosen the saddle lock screws (Fig. 5 H) with a 2 mm Allen wrench, then turn the intonation adjustment screws to adjust the saddle position. Tune the guitar and check the intonation. Repeat these adjustments until the required intonation is reached. Fully tighten the saddle lock screws and put the intonation adjustment screws into the bridge unit.

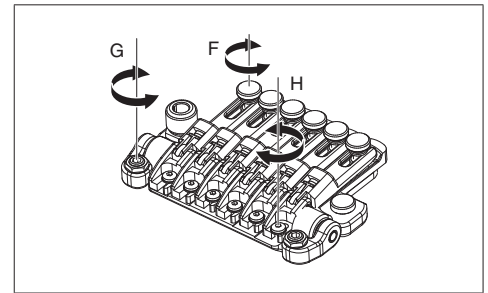


Fig. 5

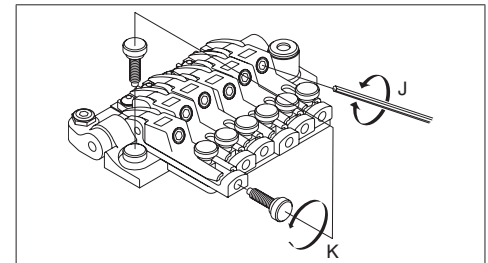


Fig. 6

## Replacing the strings

Loosen the pressure pad screws (Fig. 7 L) on the locking nut with a 3 mm Allen wrench and remove the strings from the tuning machines. Loosen the string stopper screw (Fig. 6 J) on the tremolo unit with a 3 mm Allen wrench and remove the string from the saddle. Cut off the ball end of the new string with an end nipper or wire cutter (Fig. 8). Insert the cut side of the new string between the saddle and the string holder block. Tighten the string stopper screw to secure the string. Wind the string around the tuning machine and tune to pitch. After tuning, tighten the pressure pad screw on the locking nut.

### Caution

Before you tune a string, ensure that the string stopper screw is firmly tightened.

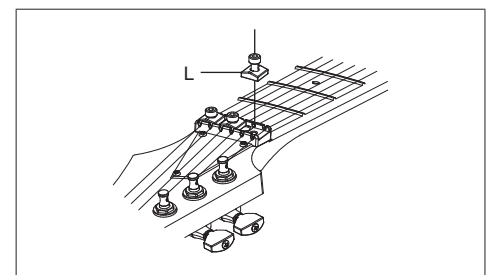


Fig. 7

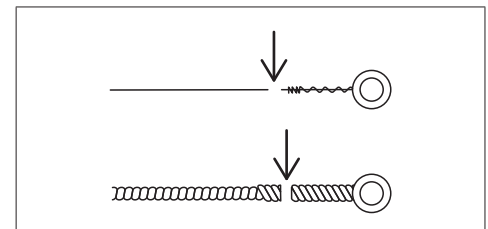


Fig. 8

## Fine tuning

After locking the strings with locking nuts, fine tuning of individual strings can be carried out using fine tuners. To provide maximum allowance for fine tuning adjustment after locking the strings, set the fine tuners (Fig. 5 F) to sit around the middle position of the range of movement before tuning.