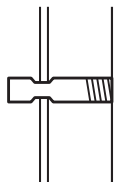


Regulating a Lever Harp

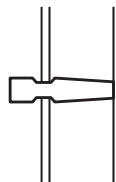
Follow the steps on the next pages to regulate your lever harp. When in doubt about a harp maintenance issue, be safe and check with your harp instructor.

The steps to regulate your lever harp are different depending on whether your bridge pins are **threaded** or **tapered** and whether your levers press the strings **IN** toward the neck or pull them **OUT** away from the neck (see illustrations below to help determine which kind you have).

Types of Bridge Pins

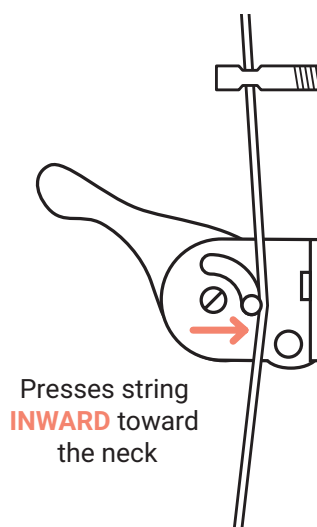


Threaded

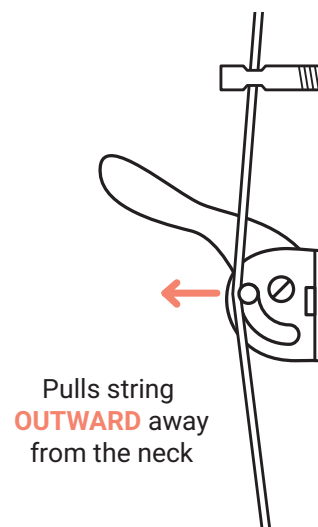


Tapered

Lever Type 1



Lever Type 2



To regulate your harp, you will need an electronic tuner, a screwdriver, and a pair of pliers.

1. First, tune your harp.

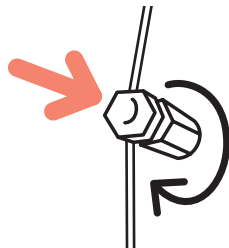
2. Play a note with the lever down and make sure it is in tune.
3. Raise the lever and play the note again. Is it still perfectly in tune? If it is, that lever does not need to be regulated. Move on to the next string and repeat steps 1-3.
4. If the note is out of tune with the lever engaged, notice if it is too sharp or too flat, and by how much. If it is only a little sharp or flat, begin by adjusting the bridge pin*. Otherwise, go to step 8.

For Levers that press the string INWARD:

5. If your note is too **SHARP**, turn the bridge pin clockwise so it moves **IN** towards the neck.



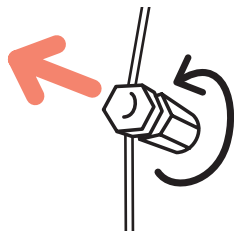
If SHARP, move bridge pin IN



6. If your note is too **FLAT**, turn the bridge pin counterclockwise so it moves **OUT** away from the neck.



If FLAT, move bridge pin OUT

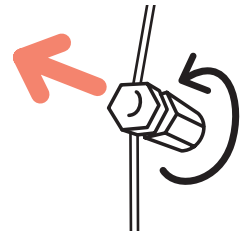


For Levers that pull the string OUTWARD:

5. If your note is too **SHARP**, turn the bridge pin counterclockwise so it moves **OUT** away from the neck.



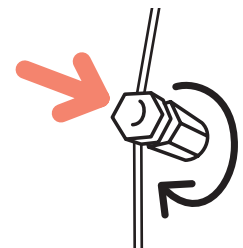
If SHARP, move bridge pin OUT



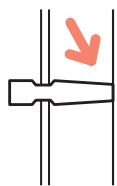
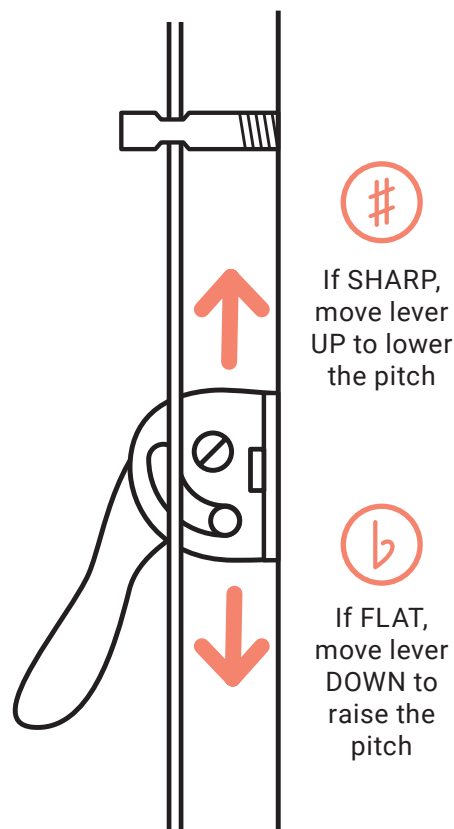
6. If your note is too **FLAT**, turn the bridge pin clockwise so it moves **IN** towards the neck.



If FLAT, move bridge pin IN



7. Ensure your string is not being angled too sharply and that it does not buzz against the lever when it is down.
8. If you need to make larger adjustments than the bridge pins can do, adjust the lever itself.
9. Slightly loosen the lever using a screwdriver, just enough to slide the lever slightly up or down.
10. If it is too **SHARP**, move the lever up towards the bridge pin to lower the pitch.
11. If it is too **FLAT**, move the lever down away from the bridge pin to raise the pitch.
12. Once you have found the correct height, tighten the lever down and test again to make sure the lever raises the pitch exactly one half step.
13. If needed, go back to steps 1-3 and fine tune with the bridge pin until it is exact.
14. Repeat steps until all levers have been checked and adjusted as needed.



Tapered

* These steps assume you have threaded bridge pins. If you have tapered bridge pins, you can gently tap them to move them inward or use pliers to pull them slightly out. Follow steps 5-6, based on your lever type, to determine whether the bridge pins need to move **IN** toward the neck or **OUT** away from the neck.