

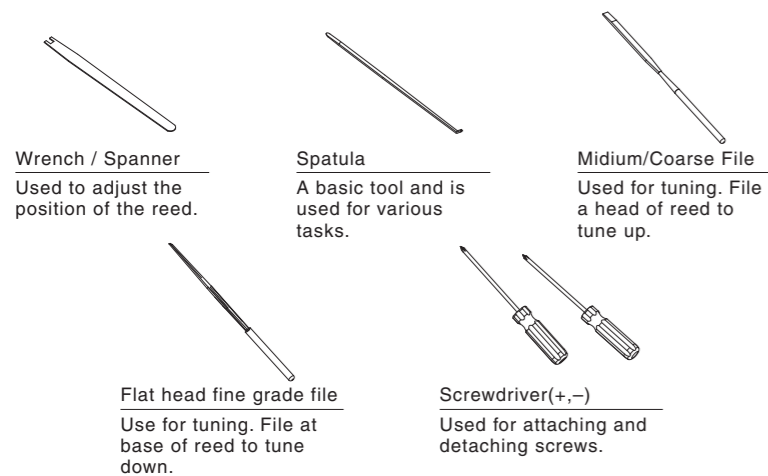
Caution

- Please be advised that this tool kit is not suitable for all Harmonicas.
- It is recommended that you work in a quiet place without interruption, to focus your full attention.
- Generally parts will have limitations in durability.
- We are not responsible for any damage or injury resulting from the use of this product. Please make sure that you understand the instructions before using.

Before use

Maintenance may be required on your Harmonica after a certain period of use. Adjustments tailored to each player will become indispensable for refining performance. The HRT-01 is a basic tool set that takes portability into consideration, so all normal maintenance other than reed replacement is possible. It is recommended that you obtain knowledge of basic maintenance and -if possible- some training from a skilled professional. It is better to practice with a broken or low cost Harmonica at first, before starting maintenance on a more expensive model. Once you understand the basics, it may be easier than you think.

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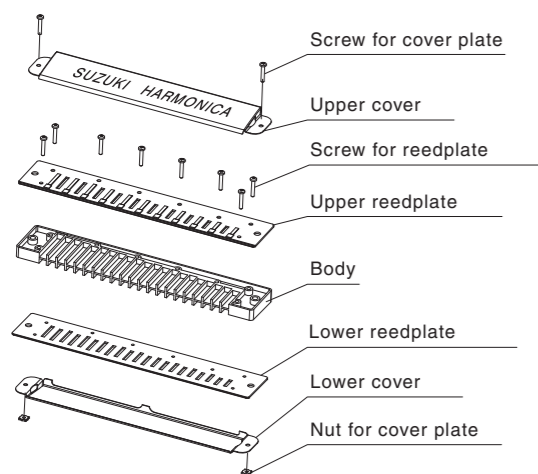


Main maintenance

- A** Cleaning
- B** Reed clearance tuning
- C** Reed tuning
- D** Adjust the position of reed

A Harmonica cleaning

For daily maintenance of your Harmonica, it is enough to remove moisture and keep the mouth piece clean and dry. We recommend MIC-30 Suzuki Micro Fiber Cleaning Cloth. If particles accumulate inside the instrument after long-term use, disassemble it as shown in the diagram and clean it. The disassembled plastic body can also be washed with water. Since the reeds are delicate, handle with the utmost care so as not to snag or bend. Wipe off the mouth piece by spraying with a Harmonica cleaner on a soft lint free cloth.

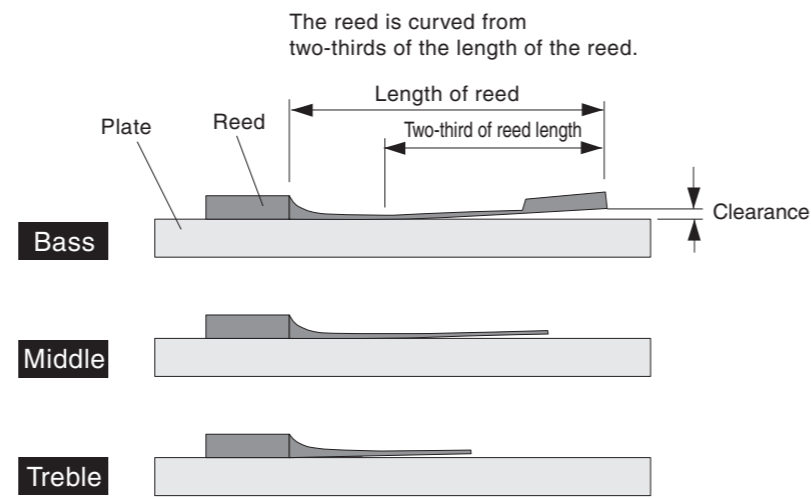


It is important to re-assemble the Harmonica so that there are no gaps in each part. Carefully check the body and reed plate, reed plate and cover, etc., and re-assemble so that there are no gaps due to particles or misalignment. The reed plate and cover are slightly curved so that they can be assembled without gaps.

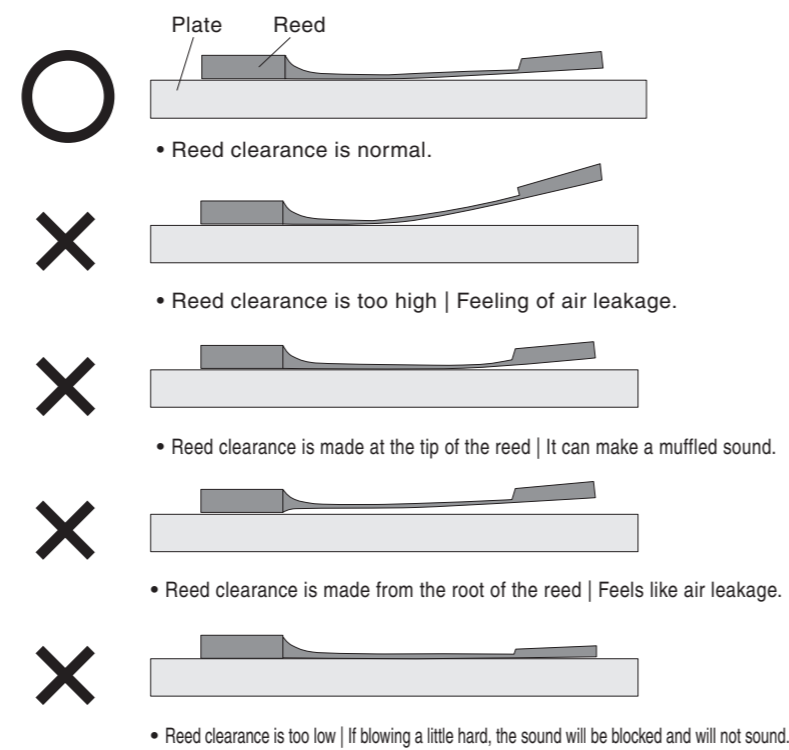
B Adjustment of the reed clearance

Clearance

The reed has a gap called 'reed clearance' for the air to flow. Bass requires more air to flow slowly, so the clearance is higher. The treble requires the air to flow quickly and more forcefully, lowering the clearance. If the clearance is too low, it is easy to get stuck at the beginning of the response, and if it is too high, it can feel like air leakage. It will be possible to adjust the clearance to suit the performer.

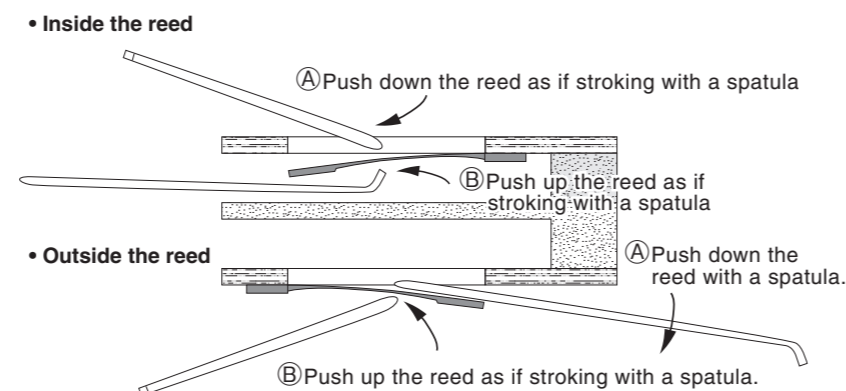


Example of reed clearance



Use a spatula to adjust the clearance to your preference.

- A**:When making the clearance higher.
- B**:When making the clearance lower.



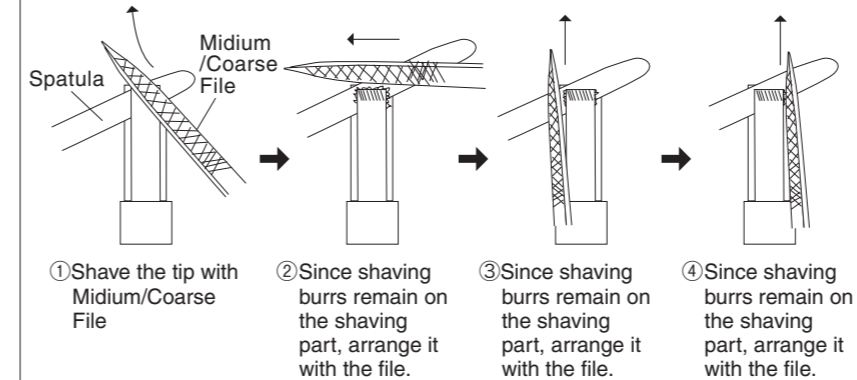
C Reed tuning

Learn how to shave reeds before tuning the reeds.

How to shave reed

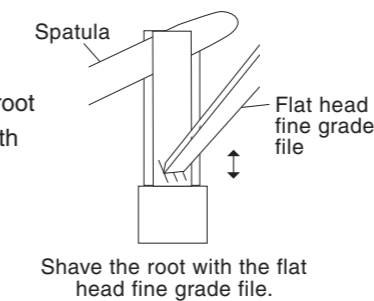
When making the pitch higher.

It is possible to raise, by shaving the tip of the reed thinly using the medium/coarse file.



When making the pitch lower.

The pitch can be lowered by shaving the root of the reed in the direction of the arrow with the flat head fine grade file.

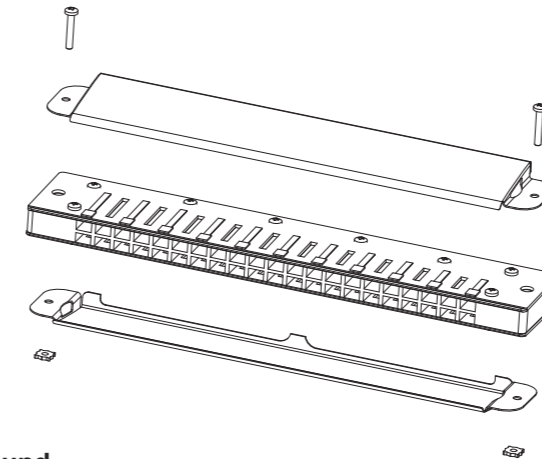


How to tune reed

1 Remove cover

After confirming notes to be checked, remove the cover as shown in diagram 1 (image is a Tremolo Harmonica, but think about other Harmonicas in the same way.)

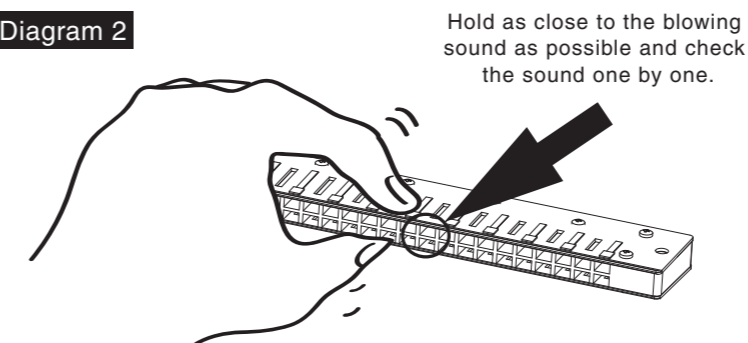
Diagram 1



2 Check sound

Use a Tuner (preferably one that can read the pitch in 1 cent units) to tune while checking the out of tuned notes, with the cover removed. At this time, if you do not check the sound by firmly pressing the air outlet side up and down, as in diagram 2, the sound will change when the cover is attached. If you are having trouble blowing through in this state, please check the sound with the cover on. For tremolo Harmonicas, you need to check the upper and lower reeds separately. If it is not easy to check notes at the top and bottom separately, please hold the reed on one side with your other hand so that only one side sounds and you can check the pitch.

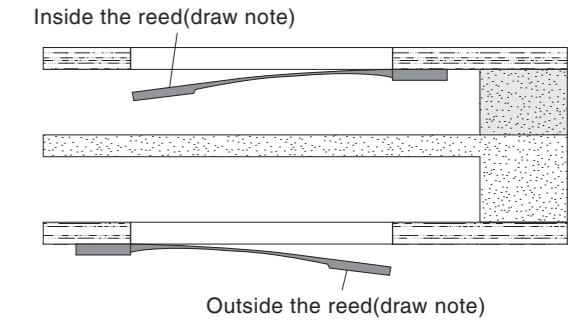
Diagram 2



3 When tuning draw notes.

As shown in diagram 3 (cross section view) the drawn reed is attached to the outside, so tune it according to the procedure of 'How to shave reeds'.

Diagram 3

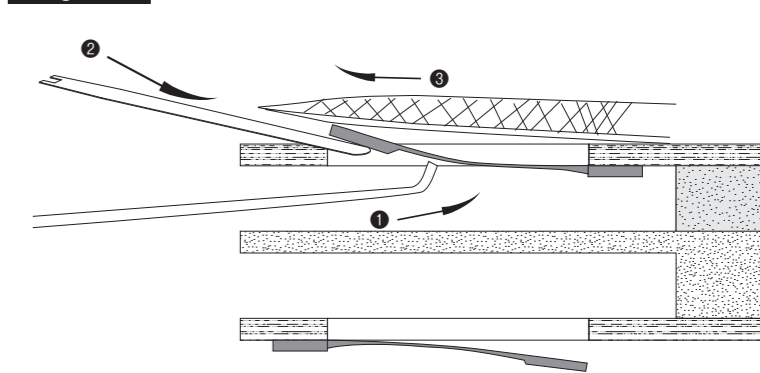


4 When tuning blow notes.

<When making note higher>

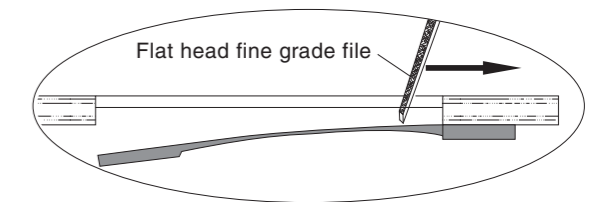
As in diagram 4, 1 use a spatula to push the reed up and 2 lodge the reverse end of the spanner under the reed and 3 use the medium/coarse file to shave the tip of the reed.

Diagram 4



<When making note lower>

Shave the base on the back of the reed from outside with the flat head fine grade file.



⚠ Caution: Please check again as the clearance may change after tuning

D Adjust the position of reed.

The reeds are attached to the plate with very little clearance. Due to disassembly or re-assembly, the reed position may move and the reed may come into contact with the plate and the sound may not be heard correctly. In this case, use the spanner to correct the reed position as shown below. Holding it over a bright light makes it easier to see this slight gap.

⚠ Caution: if there is too much movement on a reed, it may detach or fracture, so care is needed.

