



Harmoniums



Important

If you don't hear the music, stop pumping! NEVER pump the bellows unless air is flowing through one or more reeds. Forcing air into the chamber can damage the harmonium. For air to flow, one or more Stop or Drone knobs must be pulled out.

Construction of these reeded instruments vary quite a bit, so take your time and get to know your harmonium. Look at your Harmonium. Above the keyboard is the chamber cover. On some, the cover slides forward, then up. On others it is screwed. On still others, tabs hold it in place. On yet or it simply lifts off. Do not force the cover or you can crack the wood.

Origin of the Harmonium

The British introduced the harmonium to India during their colonial period. It was quickly adopted by the India cultures, and became more popular in the north than in the south of India. The original harmoniums brought to India were of two basic types, those with a hand bellows and those with a foot pump. For the Western musicians the foot pump allows the instrument to be played with two hands, one for melody one for the chords. A foot pump also allows the musician to play from a standing position, or seated in a chair. Since there are no chords in Indian music, and Indian music is traditionally played from a seated position on the floor; the foot pump became a liability. Today, the typical Indian Harmonium has a bellows activated by one hand.

Description of the Harmonium

Harmoniums are in the family of free-reed aerophones and resemble small, tabletop, organs. Each harmonium has a bellows at the back, a keyboard on top, and inside, a number of reeds set in multiple air chambers. A group of reeds mounted in one air chamber is called a bank of reeds. A single reed in a chamber is a drone.



Parts of the Harmonium

Reeds - The reeds are a thin brass tongue set into a central opening of a thick rectangular brass base. The reed and base vary in size from $\frac{1}{4}$ " x 1" to $\frac{1}{4}$ " x 2 $\frac{1}{2}$ ". The thin brass reed vibrates when air passes through the opening in the center of the base. The size of the reed affects the note. Small thin reeds have a higher pitch than wider longer reeds.

Bellows – The bellows is made of pleated paper sheets. Usually the bellows can accommodate left or right handed players. Air is forced into the harmonium by pumping the bellows. If you don't hear the music, stop pumping! NEVER pump the bellows unless air is flowing through one or more reeds.

Pull Knobs - The knobs on the front are called Stops and Drones. Stops control the airflow to the various banks of reeds. Each air chamber will have at least one Stop. There will be a number of Stops on the front; one Stop for each bank of reeds. Or multiple Stops for one chamber allowing for a more powerful sound. Stops may also control special functions, such as tremolo. Drone knobs control the airflow through fixed reeds that have no keys associated with them. Pulling the Drone knob opens the air flow to a drone reed and provides harmony to the keyboard music.

Keys- Each key represents a reed. With a Stop pulled, depressing one key on the keyboard activates one reed in a bank. If you have two Stops pulled, depressing one key on the keyboard will activate one reed in each of two chambers.

Mechanical Devices – Mechanical devices provide greater flexibility and variations in sound. These devices can include The Mechanical Coupler and the Scale Changer.

Coupler - This ingenious device physically connects, or couples, two keys. The result is that playing one key engages two reeds simultaneously. One key will play two reeds that are one octave apart. The coupler may be engaged or disengaged by the user. Couplers are not available on all models.



Scale Changer – Provides a sliding keyboard. The keys are connected with cloth tape allowing them to be slid up or down the scale from note to note. If you play a note, then slide the scale and play the same key you will actually get a new note. You can change the key of a musical piece by sliding the keyboard, rather than learning a new fingering technique. Scale Changers are not on all models.

Playing the Harmonium



The most common playing position is to place the harmonium on the floor and sit cross-legged in front of it. Bellows usually can be opened to the left or right to accommodate either hand. You can play the keys with your dominant hand while your other hand works the bellows. However, most often the right hand plays the keys. Most exercises are written for the right hand. You can also place the harmonium on a table and sit in a chair while you play. Find a comfortable pose. Practice your scales as you would with an organ or piano. Find an instructor to help you learn the Ragas.

Tuning

Most Harmoniums are not meant to be played in concert with other instruments. Therefore, they are rarely tuned to concert pitch. The reeds are selected for each harmonium individually. The reeds will sound good when played together, but not necessarily when played with another instrument. Harmoniums are meant to accompany vocals, usually for mediation. It is important that the sound played compliments the vocal and the raga and the temperament one is trying to achieve. Remember, you are not playing songs in the western sense. If you are looking for true pitch, there are concert pitch reeds that are very expensive. Look to replace your reeds with an expensive brand or don't look at harmoniums.

Care and Caution

Bellows and Air Chambers -

The harmonium has a number of delicate parts that are made of cloth, leather and wood. These restrict and maintain the air within chambers and the bellows. These parts are usually held in place with water soluble glues. Avoid pumping the bellows with all the stops pushed in; this will cause greater pressure in the chambers than the delicate parts can handle and may lead to leaks. If you don't hear the music, stop pumping! NEVER pump the bellows unless air is flowing through one or more reeds.



Be very careful around curious children. If you have ever heard a parent tell you they had to replace the VCR because there was a peanut butter and jelly sandwich stuck in to the tape slot- well there are a number vents, and holes on the harmonium that are perfect for small fingers, pencils, etc. Any holes in the bellows, or cloth vent covers will cause air leaks in the chambers and your harmonium will need repair.

Environmental Changes –

It is important not to expose your harmonium to extremes in temperature or moisture. The instrument itself is hand crafted of wood, which will react to changes in moisture and temperature. Changes in the wooden parts may cause the reeds to buzz or parts to stick and jam, or worse.

Fallen or Sticking Keys-

Under the Chamber Cover you will see the back of the keys. On some harmonium, the back of the key is held in place by a wire arm. This wire arm acts as a spring to push the front of the key up after you depress it. It is common during transport that these wire arms slide off. You will know this has happened when your key no longer springs back when played. If your key has fallen and can't get up, it is a simple procedure to move the spring back into place.



If your keys don't have the wire spring and still stick or stay down, it may be that the wood has expanded in your climate. If the wooden keys swell they will jam. If this happens slide a piece of sand paper back and forth between the keys. You do not need to create a wide gap just enough for the keys to operate freely.

Buzzing Reeds –

Sometimes simply playing a reed over and over will eliminate the buzz. If that does not work you may have to open the harmonium to view the reeds. On the front of the Harmonium, under the keyboard, is a hinge. The entire top of the harmonium will lift up to reveal the reeds and air chambers. Again each harmonium is different so do not force the top up, look for hinges, screws or levers that may need to be opened before the top can be lifted or slid off.

With the harmonium opened, find the offending reed and loosen the screws on the reed. You do not need to remove the reed, just loosen it. Reeds stick to the wood and if the wood expanded or contracted, the reed may be experiencing torque. Loosen and lift the reed slightly, then re-tightening it. Also look for any small bit of debris. Any small bit of wood dust in a reed will cause it to buzz. Clean them carefully, reeds can be easily bent and then they may not work.

Stuck Stop and Drone Knobs -

Do not force a stuck knob. Open the top of the harmonium to look into the air chamber (see above). Each knob is attached to a block of wood that slides between two wooden rails. If the block swells the knob will stick. There is a graphite power available at hardware stores, that acts as a form of dry lubrication. Use it sparingly. If that fails you may need to tap the block out from between the rails and then very lightly sand the sides. You do not want the block to wiggle between the rails. The block slides over a hole to close off air flow. If the block is loose in the rails you may have an air leak