Harmonium Fundamentals

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Lesson 1

🏅 *Recognise and understand the parts of the harmonium* 🏅

Reeds

Reeds are thin strips of metal that vibrate when air passes over them, creating sound. Different sets of reeds produce various tones and stops/knobs control their selection.

Reeds

Octave Coupler

(See Lesson 3 for clarification on an Octave)
An Octave Coupler in a harmonium is a mechanism that, when engaged, duplicates the played notes an octave higher (or lower). Its purpose is to extend the range and richness of the instrument by adding higher harmonics to the sound. By activating the Octave Coupler, the player essentially "couple" or connects the original pitch with its octave, creating a fuller and more resonant tone.

Stops/Knobs

Stops or knobs are controls that adjust which reeds are active, modifying the instrument's overall sound. Each stop corresponds to a set of reeds. If all stops are closed there will be no music as air will not be exiting the harmonium.

Stops

Drones

Drones are also stops but serve a different purpose. When activated, these are continuous and unchanging pitches that serve as a foundational reference during musical performances. They can also be used to tune other musical instruments.

Bellows

The bellows are a crucial component for creating airflow. Mastering bellows control is essential for producing sustained notes and dynamic expression. The pumping of the bellows is directly

proportional to the volume - **pump more to increase the volume of the music.** Not all bellows have the same amount of ribs. Generally, the more ribs, the easier it is to pump air into the instrument.

Scale-changing mechanism

Designed to allow musicians to change the pitch or key of the instrument without altering their playing technique. This feature is useful in Indian classical music, where a musician might need to modulate to a different scale during a performance.

Keys

Upon pressing a key, it activates a specific reed that produces a particular musical note. Each key corresponds to a particular pitch, and pressing different keys allows the musician to create melodies and harmonies

Springs

Springs in a harmonium that are attached to keys serve to provide resistance and aid in the mechanical action of the keys. When a musician presses a key on the harmonium, it activates a mechanism that lifts the corresponding pallet, allowing air to flow through the reeds and produce sound. The springs connected to the keys play a role in returning the key to its original position after it has been pressed.

Bellows

Keys

Springs

Scale-changing Mechanism

Octave Coupler

Drones

End of Lesson 1

Lesson 2

🏅 Learn the 7 Swar and their denotation 🏅

At the root of all Indian music are seven notes or swara known as Sa, Re, Ga, Ma, Pa, Dha and Ni. The name 'Sargam' comes from the first four notes in the Indian scale - Sa Re Ga Ma. These are pure notes, also known as Shuddh swar.

The proper names of these notes are in Sanskrit and are as follows:

Swar/Note	**Name**	**Denotation**
Sa	Shadhaj	S
Re	Rishabh	R
Ga	Gandhar	G
Ma	Madhyam	M
Pa	Pancham	P
Dha	Dhaivat	D
Ni	Nishad	N

🏅 Learn the Sargam off by heart - Forwards and Backwards 🏅

To sing the seven musical notes, an extra note is added at the end, denoted as **Ṡ** - making it a total of **eight notes**. This helps musicians practise singing with rhythms called Taal, which can have either 8 or 16 beats.

S R G M P D N Ṡ
Ṡ N D P M G R S

End of Lesson 2

Lesson 3

🏅 *Understand how the keys of the harmonium are structured* 🏅

Octaves/Saptak

An Octave, known as 'Saptak' in Sanskrit, signifies the interval between two musical pitches, where one pitch has double or half the frequency of another.
In the context of a traditional harmonium, it usually encompasses a range of 3 to 3.5 octaves. The keys on the harmonium are neatly divided into octaves, each comprising 7 white and 5 black keys - 12 in total.

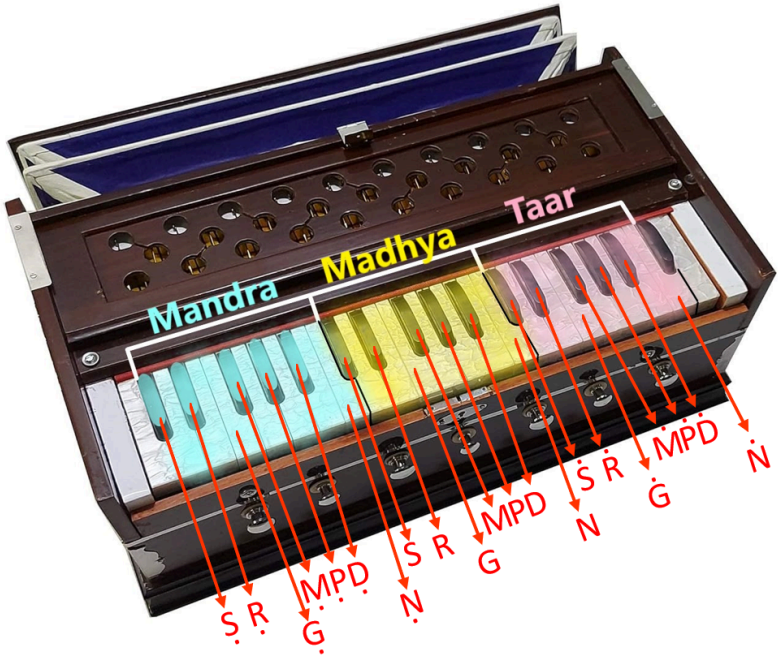
There are three Octaves that we need to be aware of:

- **Mandra Saptak**/Lower Octave
- **Madhya Saptak**/Middle Octave
- **Taar Saptak**/Higher Octave

The notes for each Saptak have different denotations. Dots below the swar signify they are from the Mandra Saptak (lower octave). Dots above the swar signify they are from the Taar Saptak (lower octave). Madhya Saptak (middle octave) swar do not have any dots.

Mandra Saptak Swar *Lower Octave Notes*	Madhya Saptak Swar *Middle Octave Notes*	Taar Saptak Swar *Higher Octave Notes*
Ṣ	S	Ṡ
Ṛ	R	Ṙ
G̣	G	Ġ
Ṃ	M	Ṁ
P̣	P	Ṗ
Ḍ	D	Ḋ
Ṇ	N	Ṅ

This is what the Sargam looks like on the Harmonium on each Octave - notice how the placement of the dots denotes if the note belongs to Mandra or Taar Saptak.



Types of Swar

Altogether there are **12 keys in an Octave** (the Sargam is 7 keys of the total 12). However, these keys and notes are all not the same, they are clustered into **Shuddh**, **Komal** and **Teevra** notes.

Shuddh Swar - Pure Notes

7 of the total 12 notes are Shuddh - which means pure. These are listed below.

S	R	G	M	P	D	N

Komal Swar - Soft or Flat Notes

4 of the total 12 notes are Komal notes, which have a lower frequency than their Shuddh versions. These are listed below.

R	G	D	N

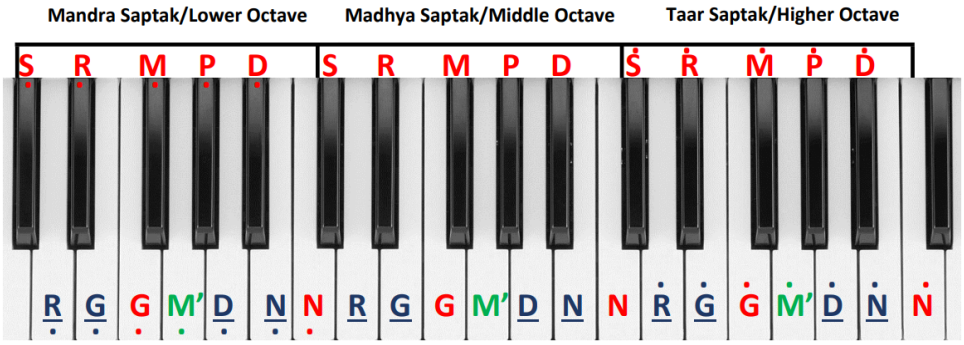
Teevra Swar - Sharp Note

1 of the total 12 notes is a Teevra note. This note sounds sharper than its Shuddh counterpart and is located one key higher on the harmonium.

M’

If we put it all together, this is what it will look like graphically but also attached is an image of how it will look on a harmonium with 3 Octaves.

S	R	R	G	G	M	M’	P	D	D	N	N



Notice how the placement of the dots denotes if the note belongs to Mandra or Taar Saptak.

End of Lesson 3

Lesson 4

🏅 *Understand which fingers are used to play the Sargam* 🏅

Playing the harmonium primarily involves using the thumb and the first three fingers, and in some cases, the pinky finger can be utilised based on the musical context. However, only the thumb and the first three fingers are used when playing the Sargam.

Right-handed Individuals

Refer to the image below for guidance on which fingers to use for specific keys.

Number	Swar/Note
2	S
3	R
1	G
2	M
3	P
4	D
1	N
2	Ṡ

Use this link to understand how to play Sargam using your right hand:

Left-handed Individuals

Refer to the image below for guidance on which fingers to use for specific keys.

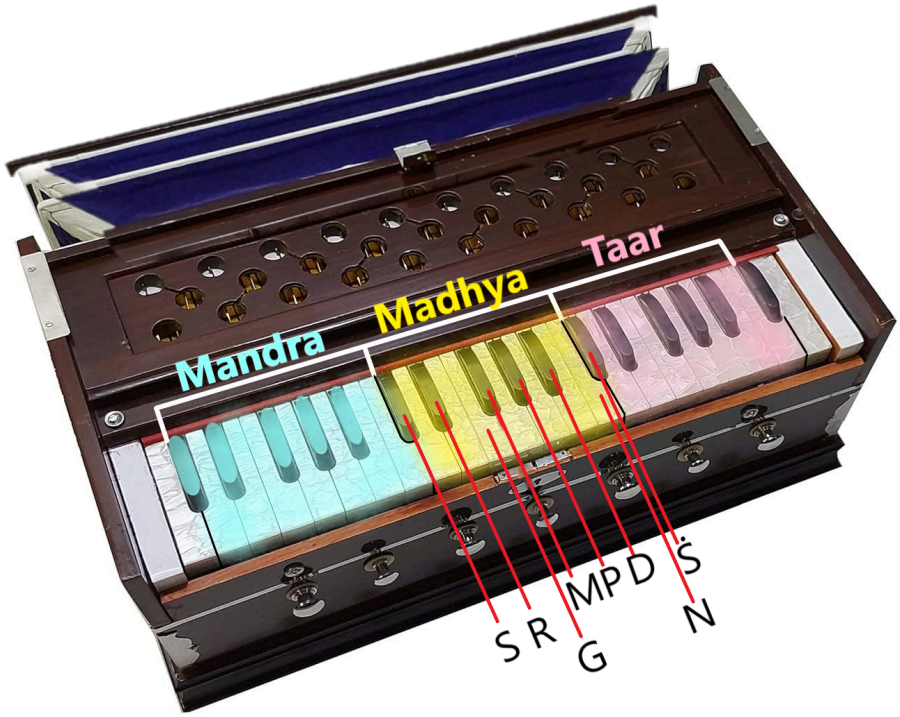
Number	Swar/Note
3	S
2	R
1	G
4	M
3	P
2	D
1	N
2	Ṡ

Use this link to understand how to play Sargam using your left hand: https://youtu.be/Rfr5Rj1ZwnI

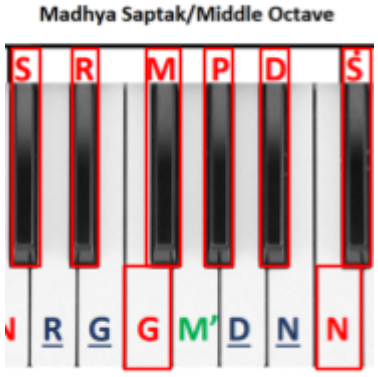
🏅 Understand which keys are used to play the Sargam 🏅

Some harmoniums have a varying number of keys, however, the example below has been given based on a conventional harmonium with 3 Octaves and a few extra keys.
Start playing the Sargam from the 6th black key (from the left of the harmonium) using the finger convention described above.

S R G M P D N Ṡ



If you are doing this correctly, you will be playing the red notes in the Madhya Saptak as shown in the image below.



(Use this link if you have any trouble playing:

🏅 *Play the Sargam backwards once forward is mastered* 🏅

Consistency is key when playing the keys in reverse; maintain the same finger convention as used for forward playing.

Ṡ N D P M G R S

Right-handed Individuals (backwards)

Number	Swar/Note
2	Ṡ
1	N
4	D
3	P
2	M
1	G
2	R
1	S

Left-handed Individuals (backwards)

Number	Swar/Note
2	Ṡ
1	N
2	D
3	P
4	M
1	G
2	R
3	S

End of Lesson 4

Lesson 5

🏅 Play and Sing the Sargam - Backwards and Forwards 🏅

When playing the Sargam forwards and backwards becomes natural, incorporate singing. Begin by playing a note, carefully listening to its sound. Then, attempt to reproduce the same note with your voice, ensuring the accuracy of the pitch.

Ensuring the tone of your voice aligns with the tone of the played note is crucial. This holds greater significance than merely hitting the correct notations, as our ears easily detect discrepancies in pitch.

Initially, it's more manageable to concentrate on playing before incorporating singing. Many novice students encounter challenges when playing harmonium keys and singing simultaneously.

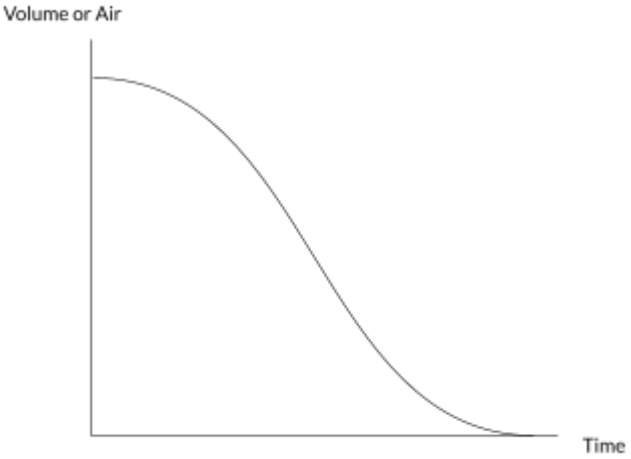
End of Lesson 5

Practical 1

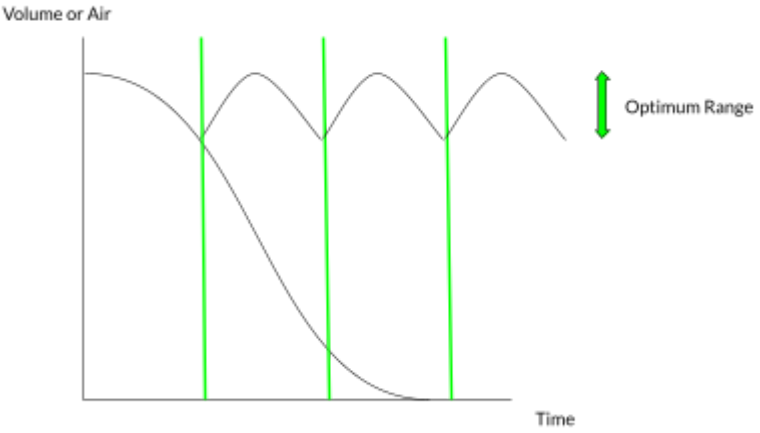
🏅 *Playing Exercises* 🏅

When playing the Harmonium, it is important to master how to pump the Bellows of the Harmonium to keep the music at the same volume throughout the whole song or performance.

When pumping the Bellows initially, the music is loudest at the start and gradually lessens as the air escapes from the instrument.



Therefore, one must get accustomed to pumping the bellows as soon as the music volume starts to dip. This will keep the music volume in the optimum range.



However, it is crucial not to over-pump, as this will cause the volume to exceed the optimum range.

Refer to this video to understand this in practice:

Practical 2

🏅 Sargam Exercises - in Teentaal 🏅

Practicing Sargams within a rhythmic framework, or taal, is crucial for honing your sense of timing and grasping the rhythmic flow. Sargams are typically performed in Teentaal or Kaherwa, encompassing 16 and 8 beats, respectively. ***Master playing each exercise on the harmonium through practice before incorporating singing into your routine.***

This is what singing in 16 beats looks like on paper:

16 Beats Taal - TeenTaal

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	R	G	M	P	D	N	Ṡ
Ṡ	N	D	P	M	G	R	S								

Exercise 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	**R**	**G**	**M**	**P**	**D**	**N**	**Ṡ**
Ṡ	**N**	**D**	**P**	**M**	**G**	**R**	**S**								

Exercise 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	**S**	**R**	**R**	**G**	**G**	**M**	**M**
P	**P**	**D**	**D**	**N**	**N**	**Ṡ**	**Ṡ**								
								Ṡ	**Ṡ**	**N**	**N**	**D**	**D**	**P**	**P**
M	**M**	**G**	**G**	**R**	**R**	**S**	**S**								

Exercise 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	**R**	**G**	**-**	**R**	**G**	**M**	**-**
G	**M**	**P**	**-**	**M**	**P**	**D**	**-**	**P**	**D**	**N**	**-**	**D**	**N**	**Ṡ**	**-**
Ṡ	**N**	**D**	**-**	**N**	**D**	**P**	**-**	**D**	**P**	**M**	**-**	**P**	**M**	**G**	**-**
M	**G**	**R**	**-**	**G**	**R**	**S**	**-**								

Exercise 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	**R**	**G**	**-**	**S**	**-**	**G**	**-**
R	**G**	**M**	**-**	**R**	**-**	**M**	**-**	**G**	**M**	**P**	**-**	**G**	**-**	**P**	**-**
M	**P**	**D**	**-**	**M**	**-**	**D**	**-**	**P**	**D**	**N**	**-**	**P**	**-**	**N**	**-**
D	**N**	**Ṡ**	**-**	**D**	**-**	**Ṡ**	**-**								

Exercise 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								S	**R**	**G**	**M**	**R**	**G**	**M**	**P**
G	**M**	**P**	**D**	**M**	**P**	**D**	**N**	**P**	**D**	**N**	**Ṡ**	**Ṡ**	**N**	**D**	**P**
N	**D**	**P**	**M**	**D**	**P**	**M**	**G**	**P**	**M**	**G**	**R**	**M**	**G**	**R**	**S**

Use this link to help with some of the exercises:

Disclosure

This work has been compiled by Master Nikhil Prasad. The content written in this ebook has been gained through the research and experience of learning music from various music teachers online and in New Zealand. This course material is designed for beginners of Hindustani music who want to learn through the medium of the Harmonium.