



This book is written with a specific goal to promote learning the accordion as an amazing musical instrument. The mainstream population in the sub-continent, as well as the African continent have not yet embraced accordion, missing out on a global variety of beautiful songs, rhythms, genres, and dances. The exact reasons are not known. There is also a grave misconception that accordion music is restricted to playing only a narrow few categories of music. I like to speculate that it is because of the seemingly difficult skill that is required to play the bass chords. However, the main reason is the fact that different music scales, theory and traditional practice exist in the regions mentioned where harmonies and chords are considered less important. They enjoy music somewhat differently. The music is considered a universal language and people all over the world enjoy one another's music and learn how to play exotic music instruments. In the case of accordion, certainly, it looks a bit formidable and complicated with its several buttons and switches. But let the look alone doesn't deceive

anyone!. Here, I like to make an earnest attempt to change the status quo, and make it lot easier to learn and play the accordion as good as any other popular instruments.

A good deal of effort is also expended to illuminate certain features, intricacies, beauty and moods embedded in music which is not so adequately highlighted in music theory and practice alone. This is accomplished by introducing additional topics such as human faculty of hearing, *scientific, mathematical, acoustic, accordion specific, and other closely related aspects* existing in the universe that are applied specifically to music. *In this book, many of the concepts, theory & structure of music, as well as playing techniques are elucidated with the aids of various media resources such as diagraphers, illustrations, charts and tables. If the reader is a musician and already familiar with music, this will give even deeper insight into it.*

Chapter 1

The amazing Accordion

It still amazes me in many ways, hence the title is chosen to reflect the identical sentiment. It is the most amazing musical instrument, I have come across. That's also the reason why I made an earnest attempt to learn it as well as I possibly could though I started it quite late in life. It also serves as the overwhelming reason for my purposeful and sincere intent to introduce this musical instrument to the Desi, paradesi, diaspora, and the global immigrant communities.
Let many more enjoy the amazing accordion!

Chapter 2

The anatomy of accordion

It is always helpful to know the tools, devices, gadgets, appliances, machines and instruments one regularly uses, well. The insight gained will help to use them efficiently, properly and to its full

potential. This topic will serve just the same purpose. The accordion's body mainly consists of two wooden chambers; sandwiched in between is the bellows. The left hand side houses reed blocks and push buttons for the Bass chords; the Right Hand side also houses reed assemblies with an extension to hold the piano style keyboard. It is a complete and versatile instrument made of about 15,000 discrete parts, putting out enchanting sounds in several voice ranges and timbers.

Chapter 3 **The Bass system**

The bass side is designed primarily to play rhythms with the left hand to accompany the melody played on the treble keyboard with right hand. Literally, the left hand plays 'hand in hand' with the right hand. Accomplished players can play melodies and counterpoint on the bass side as well.

Chapter 3a **The layout of the Bass buttons (Chord buttons)**

Accordions have buttons on the bass side that play preset chords set up according to the circle of fifths. It is quite reassuring that one doesn't have to know where each button is placed and in what cell. All that needs to be known is the general scheme that is replicated throughout the system which can be almost intuitively followed after a while!

Chapter 4 **Structure of chords**

Many chords can be built combining notes with different intervals. In Western music, the most common chords are Major, Minor, Seventh, Diminished Seventh. In *accordion, the chords are made of triads. Piano can play chords with more number of notes. 4 note chords are common. (If we had more number of fingers, we could have played chords with more notes). For practical/technical reasons, in accordions, the major 7ths are inversions. The 7th or the Dominant 7th is built from Major triad+minor 7th. There are also chromatic single tones provided in the 2 end columns facilitating playing melody, harmony and chord rhythms as well as simple counterpoint melodies.*

Chapter 5 **Making of an accordion**

The making of accordion requires exceptional craftsmanship, precision, diligence; assembly and wood working & fabrication techniques. *All start with wood, most commonly the 'poplar'. It takes a lot of wood carving, shaping, polishing, gluing custom crafted, shaped pieces of wood. It also uses a variety of ductile light metal pieces, made into small sliding, pushing, pivoting bars, moving levers and arms as well as connecting rods. Mechanisms are used to operate sliding cardboard masks in closing and opening sound/tone/air holes. The pivoted keyboard arms opens the air flow paths to the reeds. The Register switches move the masks to precise positions in order to select the appropriate reed blocks to keep it open. **Bellows:** The accordion is an aerophone musical instrument, which means it needs air flow to produce sound. The bellows fulfill that function by generating flow under pressure. It also serves the important function for the articulation of the sounds. The bellows are sandwiched between the Treble keyboard side and Bass button sides, located in the middle.*

Chapter 6 **The physics of sound & Auditory sensation**

In this book, we will examine sound and its characteristic attributes or properties and how a sound becomes musical. Subsequently, we'll discuss the specifics & structure of music as applied to vocal music and various musical instruments, and finally how all the knowledge & theories can be applied specifically to the accordion. The playing of the amazing accordion should then become less cumbersome, even friendlier, easier, and faster!.

Sound becomes music when a series of tones arranged one after the other, so as to produce a continuous, unified sequence as through the **melody, harmony, rhythm, and timbre** in them evoke a pleasing auditory response in listeners.

Chapter 7

The power of music

Music has enormous effects on living beings, regardless of the species. Most everyone of them sing, listen and respond to music they like. Mothers sing lullabies to infants to stop their crying; to stop their tantrums, sooth and lull them to healthy, peaceful sleep. The farm workers hum and sing to relieve monotony; many believe that the the plants grow well in a musical environments. The birds chatter, animals mew; the river flows; the breeze swings the branches that flutters the leaves. There's music in them. There's music everywhere!. It's universal!. The believers chant, recite and sing to gods in praise, thanksgiving and asking for blessings. It's even ethereal!

Strange as it may seem, the brain has different pathways or channels for processing different parts of music components such as pitch, melody, rhythm, and tempo. Even subconsciously, our body systems respond accordingly by affecting heart rate, breathing, blood pressure, and physical movements. We tend to dance with artistic, elegant and now a days with exaggerated, jerky body gestures.

Chapter 8

The pleasing sound of Music

When a series of selected mostly consonant tones of varying pitches and time durations occur in a time scale which evoke pleasing hearing sensation, it is music!

Generally speaking, any sound can be musical; even in speech, as we see now even in Rap music.

When sounds occur at intervals, the listeners sense the presence of rhythm. Melody is a series of tones and they have length/duration as well as finite intervals between each of them. Therefore rhythm with beats is inherent in a melody, even if it is not expressed or highlighted individually!

Chapter 9

Musical Instrument & its distinctive tone (Timbre)

Apart from the theoretical waveform shown in the book, every sound, voice, or musical instrument consists of many other components which make each sound distinct and unique with its own inherent timber. In speech, the vowels are spoken with 'Low' frequencies, and consonants in mid to higher. For correct speech recognition it's important that the hearing quality spans the entire speech range of frequencies. Music spans the most used and familiar speech range and much beyond in the 'sweet spot' of the human auditory perception.

The layout of the musical keyboard

Perhaps, the best way to get started with music self- lesson is with the aid of a keyboard. Thankfully, it can also begin with zero investment. If one doesn't already have a keyboard, a virtual keyboard may be downloaded from the Internet. *The first step is to do a visual analysis of its layout and configuration. If one intends to be diligent, start listing what is clearly visible. No piece of observation or detail is too minute or trivial!. Then start playing each key one by one listening to the hearing sensation a string of sound makes. We could vary note durations and note selections each time for different sensations.*

Chapter 10

Keyboard layout & configuration

The 7 Keynotes (SapthaSwara)

Amazingly, across many cultures and countries most commonly a 7 note musical scale is used! The 7 notes (though they may not represent the exact same notes) may be also known by different names; such as: **Do Re Mi Fa Sol La Ti**

C D E F G A B
Sa, Ri, Ga, Ma, Pa Dha Ni

This is mainly because of the universal and fundamental mathematical relationship of pitch, frequency, sound pressure, and loudness properties that prevails in melody and rhythm as well as the human hearing faculty.

Chapter 11 **Finding the C note**

It seems that the first note commands an extra significance, that it anchors the other notes in some uncanny ways. We need to fathom the secret by finding that particular note!. Of course, we have to start somewhere!. Be it forewarned that it is going to be a little bit too tedious of an exercise. *We could start with some basic knowledge that C is one of the keynotes and White in color. It is also well known that if we start with C and continue on with the sequence CDEFGAB (just the diatonic white keys) the sound is noticeably melodious. That's the music we love to hear!. Well, that alone doesn't solve the puzzle of finding C, as there are 7 keynotes in all, and they are all whites....!*

Chapter 12 **The naming scheme of keys**

On a Keyboard, many keys of black and white are seen arranged in certain pattern. The black ones are raised and are set farther back than the white ones. Although we understand that each key represents a specific musical note we need to identify them by names for the purpose of using them in singing, playing, reading, writing, composing etc. This chapter is dedicated to address this specific goal. Important details are explained with the aid of images and other media resources.

Chapter 13 **Note Intervals**

Note intervals, here in after described just as 'Intervals' are very important in understanding and playing music. They form the basis of music scales and the structure of chords. Because of its prominent role in many situations, it may be described in various ways, means and terms in different topics discussed in this book!. *Simply speaking, an interval is the 'distance' between pitches/ notes. There are types of intervals. One category is consonant & dissonant intervals. Consonant intervals are intervals that are pleasant, stable, which means they require no resolution. The consonant intervals are P1, m3, M3, P5, M6, and P8. All rest of the intervals within the octave are considered dissonant. Dissonant intervals are tense, harsh sounding, causing discomfort and unease. Invariably, it will require another sound which brings about relaxation, comfort and resolution to its 'untenable' condition. The fact that whether an interval is consonant or dissonant is determined by the mutual relationship in terms of their proportionality in pithes in the involved notes and its sound quality.*

Chapter 14 **The Chromatic Scale**

A scale is a series of musical notes organized in ascending or descending order by specific pitch intervals. There are many different scales, built around many different sets of relationships. Most classical Western music is based on scales built on 7 notes around an octave of eight notes where the 2 end notes are the same notes (do-re-mi-fa-sol-la-ti-do).

Chapter 15

Similarities of color and sound

There are many important similarities between color and sound. The concept of the degree of consonants and dissonance is analogous to contrast & shades (tinge) in optics and colors. Contrast is the difference between light and darkness. The stronger the contrast, the difference between two colors is obvious-as in Black and White. It means deviance, divergence, dissent, discordance, variance, also incongruity, and nonconformity.

Chapter 16

Harmonics/Overtones

Generally, even a single note when it is played, makes overtones. Overtones are defined in *music* and *acoustics* as any of the tones other than the fundamental frequency, that constitute a musical sound and contribute to its hearing quality. Any sound has a fundamental frequency and associated pair components that are multiples of the fundamental frequency. Harmonics are also overtones tone that is a component of a complex sound wave. It contributes to the fine distinction of individual human sound, various musical instruments and other sounds in the universe.

Chapter 17

Intervals of the Major Scale

Most music scales use a heptatonic scale comprising of *seven* notes within an octave. Major, and minor scales are prime examples. The Major scale is perhaps the most popular scale in western music as it is liked for its simplicity, and inherently joyful expressions. When played in sequence, the notes of the Major scale make the famous do-re-mi-fa-so-la-ti-do sound. This characteristic sound of the Major scale is created by a specific pattern of 'step intervals' between each notes. There are seven notes (but 8 notes are usually played!) in the Major scale and seven intervals lie in between them.

Chapter 18

Interval Sizes & characteristics

Music is made using music scales. A good knowledge of these topics is necessary to understand, build, sing and play music. Interval names are based on the notes in the Major scale. They have distinct character, degree of consonance or dissonance, capacity to create a mood or impression, reminding listeners of a particular situation.

Chapter 19

The Scales and Melody

A note by itself is only a sound, it's not music; also a note with the same duration is a dull drone. It becomes apparent that a music should have different notes in them to evoke listening pleasure. It means the music shall consist of sound of varying pitches and time durations. The music notes are tuned to different pitches calculated on a logarithmic progression as elaborately explained previously. Any music will make use of variations in these two main parameters. It is commonly embellished with the addition of several attributes.

Why are scales important?

The music scales signify specific grouping and order of 7 notes (heptatonic scale) each selected from the total supply of 12 chromatic notes within an octave which form a certain agreeable melodic relationship between them. This tonal relationship holds good for all the corresponding, succeeding, and preceding octaves. This grouping and order are built essentially on *note intervals* in terms of number of steps- Whole & Half steps. It also specifies the sequential order of the intervals applied. There are at least two distinct process and /or building blocks involving the building of scales.

Chapter 20 Interval structure of the Major Scale

The Major scale is by far the most common scale in western music. When played in sequence, the notes of the Major scale make the famous do-re-mi-fa-so-la-ti-do sound. This characteristic sound of the Major scale is created by the pattern of intervals between its notes. There are seven notes in the Major scale and seven intervals in an Octave. This pattern is exactly as it is in Octave C!. When this pattern (the order of 7 white keys in the C octave) is replicated in the same manner with any other note in the Chromatic scale, we can build Major scales for that key. Oh, what a blessing!

Chapter 21 Music Scales

Music scale is the spelling and grammar of music, or the basic building blocks in making music. In Western music, the Major scale has a unique structure of '*note intervals*'. All Major scales follow the same 'step interval pattern'. It plays the same keys when playing upwards or downwards. Minor scales which in this book refers to only the melodic minor, differ in their structure of '*note intervals*' follow its own identical pattern. The main anomaly here is that in its descending mode, it plays one or more different notes than when going upwards. In the descending order, it is similar to a particular major scale and therefore called its 'relative major'. Consequently, the minor scale assumes the key signature of its relative major scale.

Advantages of learning scales

The understanding of the music scales help musicians in multitude of ways. It gives the necessary information to recite, sing, perform and enjoy the music. Even a basic knowledge of the scale is quite helpful in that it points to the right notes in a music. Yet another way is to consider music scales as a musical 'paradigm' (one that serves as a pattern or model). It also comes to light, that various components in music, are closely related, though they are explained in various terms in different contexts. One musical attribute is derived from another. A good understanding of the scales, spontaneously leads musicians to the correct notes in the music.

Chapter 22 The Major Scale

All major scales has the same interval structure faithfully built following how the white keys on a keyboard from C to the next C are laid out. It follows a specific rule of steps called step intervals. A

cursory look at the octave of “C” shows the intervals as “**Whole, Whole, Half, Whole, Whole, Whole, Half** in that sequential order of steps-interval between the notes. Summarized it to say, to build a Major scale with any key just follow the sequential order **2 Whole; 1 Half**; then **3** consecutive Whole; ending with **1 Half** steps. **It's a symmetrical scale!** (In one sense, it looks symmetrical and in another way not exactly so!). It is somewhat puzzling!. The Interval relationship in descending becomes: **Half, Whole, Whole, Whole, Half, Whole, Whole.** (beginning with **1 Half; then 3** consecutive **Whole**, followed by **1 Half**; ending with **2 Whole**). The neophytes, novice or beginners in music love major scales. The chord playing on the accordion is much easier too; in that, the '*chord-buttons*' to be played are conveniently accessible. In most cases, they are located in the nearby rows either one up or one down. Humans are happier in and around home surroundings!.

Chapter 23 **The Minor scales (the Melodic Minor scales)**

There are 3 forms of minor scales: natural, harmonic and melodic
Initially, this scale appears not so '*player-friendly*'. It gives some trepidations to the beginners and some musicians. Actually, it's very music friendly and chosen for all types of music .

The harmonic minor scale have the same notes in ascending and descending orders. They are mostly found in Middle eastern music. They are not discussed here any further!.

Melodic minor scale -has 2 modes: ascending and descending. This is also based on certain mathematical principles involving interval and melodic relation ship. Simply, music in minor scale is called "melodic" because is it easier to sing; there is no augmented 2nd interval. The ascending form has half steps between 2-3 and 7-8.

The ascending format of the scale is: (Low -high pitch) **W H W W W W H**

where as the descending format of the scale is: (High- Low pitch) **W H W W H W W**

It is **asymmetrical!**

However, the *descending order of a minor scale* is exactly the same as another particular Major scale.

Therefore that major key is called the **relative Major**. Let's find out what that particular Major is !

Just like the Major scales, the melodic minor scales also have 12 different key signature forms; 6 with # and 6 with **b** signs.

Chapter: 24 **Circle of Fifths**

It is essentially a two face clock! Or consisting of 2 concentric circles of different diameter. Important pieces of information such as musical properties, relationships are depicted which can readily be read out at a glance. It shows the order of sharps and flats as they occur in music; how many sharps or flats are in a key which notes are sharpened or flattened in a scale; the clockwise direction '**the order of sharps**'; the anticlockwise direction '**the order of Flats**'; the order of Fifths and the reciprocal Fifths. The larger outer circle shows the structure of Major scale while the smaller inner circle those of the minor scales. Explained and given are: Illustration; charts, tables.

Chapter: 26 **Musical attributes**

This chapter explains musical articulations & ornamentations and how they are written and played.

They are closely related, so much so described under one title. An ornamentation is used to ‘*adorn*’ a note, phrase or passage. It is a group consisting of different “sound effects” similar to the effects used in the TV and visual media. They embellish the particular note by way of its execution and playing style. These may be considered as the ‘*musical cosmetology*’.

Music can be expressed with many attributes-style, tempo, effects, mood, emotions, degree of different loudness, etc. They are applied to the origination, development, growth, culmination and decay of the sound in its period of existence. Each of these stages may be embellished, articulated in different ways. Specific symbols and terms are used to guide or instruct musicians regarding its application and execution. Individual notes in a music could be played in numerous ways, each style expressing a distinct listening effect. The ‘*articulation*’ specifies how each note should sound like. Many symbols and notations are used to facilitate carrying this task out precisely as intended by composers.

Chapter: 28 **Chords and Harmony**

Music sounds can be felt a little dull to hear if they are simply monophonic (having a single melodic line) or single notes played one at a time. The alternations between monophonic and polyphonic notes gives music additional variations, sweetness, color, vibrato and tremolo types of audio effects. A collection of notes together at the same time can create different degrees of harmony giving a different listening sensation. This mainly relates to the chords of different names and effects. Chords are created using the ‘*rule of intervals*’. The richness and variety of harmony multiplies with each extra note as it introduces additional intervals. Two-note harmonies have one interval. Three-note harmonies have three intervals, between each note and each other. Four-note harmonies have six intervals, and increments further.

Chapter: 29 **Playing Bass chords on accordion**

The clever, methodical, and ergonomic arrangement of Bass buttons greatly simplifies playing them, once the accordionist becomes knowledgeable with its layout.

Basically, the buttons make sounds in the lower “Bass” and/or other voice ranges. Therefore, in music notations, they are marked on the Bass clef. (It’s common to have options to have combination switches which operate in other ranges too). It could be considered as a virtual keyboard with extended Octaves lower!. On accordion, all chromatic notes are available in the First and Second columns, although arranged in different order, specifically in the order of Fifths & corresponding Major Thirds. As reiterated in several contexts, this relationship is very important. They occur uniformly throughout in all the rows of the bass button layout. The buttons are arranged in a matrix of diagonal row & vertical column arrangement as in a ‘spreadsheet’ program. The accordion bass system offers 4 different triad chords- **Major**, **Minor**, **Seventh** (Septime), and the **Diminished** chords related to its root notes. Each of the given number of rows contain a root note in the Second column. The buttons in the First column contain the Major Thirds of the respective root notes. Obviously, both are **single tone notes**. The rest of the 4 columns contain triad chords. Illustration: Stradella Bass configuration & layout

Chapter: 30 **The Bass button layout**

In accordion Bass configuration, although universally consonant intervals are used, the last column at the Palm’s end is an exception; it contains all diminished chords, which are Diminished 7ths of the root notes. They are noted by the suffix ‘Dm’.

- **The diagonal Rows of Bass buttons**

All rows are identical as it follows the same button layout as given below: All buttons in the same row are named after and derived from the root note.

root note (a single tone note) in the 2nd column

Major Third of the root note in the 1st column

Major chord which is a triad consisting of three notes located in the 3rd column of buttons

minor chord is also a triad of three notes located in the 4th column of buttons

Seventh also a triad consisting of three notes located in the 5th column of buttons

Diminished Seventh, a triad consisting of three notes located in the 6th and the end column of buttons.

- **The vertical Columns of Bass buttons**

The buttons in the vertical columns are arranged according to a pattern elaborately explained in the “Circle of the Fifths”. This means that every ‘next’ button in the vertical column possess ‘Fifth interval’ relationships which are replicated to the entire extent of the vertical column. However, the buttons below the row of C have a relationship in the order of reciprocal fifth.

Chapter: 31 **The Music Notations & sight reading**

The music is universal. It must be able to be read by everyone irrespective of any native language. It follows the same principle of universal *symbols, images or icons* everyone can comprehend without knowing a new language, alphabet, words and the complicated grammar, where only the meaning of the icons need to be understood. Many graphical symbols are used at airports to provide vital information on such things as baggage claim, customs/passport, concourse, designated exits for train, taxi, hotel and other services, etc helping all passengers and travelers regardless of mother tongue or nationalities navigate to desired destinations without delay or difficulty. The “GUI” in computer applications also follow the same principle. Arguably, alphanumeric and music may be one of the foremost pioneers in this respect using symbols that could be easily identified and interpreted. In the case of music, attention is given to the fact that they must be readable much faster; they must be clearly understood at the same time. It must also be as compact as possible.

Considering all the above stated considerations, the Music is written in an '*intuitive graphical illustration*' using musical notations representing its '*duration values*'. It is to be shown / written in a two dimensional media, such as a sheet of paper. There are 3 distinct quantities or parameters that have to be shown. It is also artistically depicted, respecting the status of music as an *art form*.

*In this connection, several ingenious methods are resorted to. The pitch is plotted on the Y-axis on staff lines or in the spaces between lines. The time /duration of each note to be played is shown in different graphic symbols in its representative values and plotted on the X-axis. The X-axis is marked in segments called ‘measures’ which has certain time values given in terms of the number of ‘designated note values’. In this scheme, each note has an assigned position on the staff. The notes in white are identified by 7 alphabets **C,D,E,F,G,A,B**, and not by its pitch frequency. Certainly, the pitch correlates to the assigned names of the notes by implication. The basic unit of “duration” is a Quarter note which is deemed as a count value of 1. Other lengths of duration are either multiples or fractions of the venerable Quarter note!. Alternatively, just like the ‘parts of speech’ of a language, music has also many parts. Here, each part will be discussed in an elaborate manner under specific headings and topics*

with the aid of charts and illustration. As an additional resource, practice & video tutorials will be available for viewing under “Music Video” on the website : <https://www.desi-paradesi-diaspora.net>

Chapter: 32 **Note Length & Time Interval notations**

Illustrations: staff lines, KEY & time signatures, note durations, beams, brace, tuplets, etc.
The system of using staff grid is elaborately explained!

Chapter: 33 **Reading Music score (sight reading)**

The sight reading of music requires knowledge of the vocabulary/names of music notes & terms, the note duration values & its figure representations, the special writing **schemes** as well as the numerous music symbols utilized. It is analogous to knowing the alphabets and grammar of an unrelated language altogether. It begins with the familiarization of all the 12 different notes of the chromatic scale comprising of 7 keynotes (7 naturals or White keys) and 5 accidentals (Black keys). Besides, there are text based specific instructions which need to be understood as how each shall be executed properly. The pitch and duration of the notes are the most important elements. There are many other attributes applied to music by way of its articulation and ornamentation. Therefore rather stringent rules, norms, conventions and methods are laid out and specified to write and read a music score. As there are alphabets and punctuations for languages, music has its own nomenclature, notations, symbols and literary explanations.

Chapter: 34 **Guidelines and Markings**

There are additional guidelines and markings on the music sheet so that it can be played as intended by the composers or music conductors. They are included on music score sheet.

Chapter: 35 **Resonance**

Resonance simply means to "resound" or to sound out together in unison producing an amplified sound. Resonance is a common cause of sound production in musical instruments. Musical instruments make sound vibrations in standing wave patterns in their natural frequencies which consist of a fundamental frequency and harmonics of the fundamental frequency. All the harmonics and overtones surround the fundamental frequency. However, the complex wave front appears as a single rich tone.

Chapter: 36 **Sound characteristics**

Instrument classifications

Instruments are loosely classified by the means by which it initiates sound. It is obvious that one instrument could fall into other categories by the logic applied. The classification is mainly one of consensus. In all cases they result in making waves in the air with periodically alternating pressure and amplitude levels.

Chordophones (string instruments). A vibrating string, whether plucked, bowed, or struck, makes the sound

Aerophones (wind instruments). A column of air within the instrument makes the sound

Membranophones (drums). A membrane (skin) stretched over a resonator or frame makes the sound

Idiophones. The entire instrument vibrates to make the sound

Electrophones/microphones The instrument makes sound through a loudspeaker

The pitch of the wind instruments is determined by the length and shape of its air column in the pipe the effective length of the column is varied by the holes, bell shapes, valves, slides etc.

Chapter: 37 The eminent role of wood in music instruments, the tone wood

The fabulous wood

*The versatile roles of this gift and bounty from the nature are enormous. Among its myriad of every day uses, we are here interested in its eminent role in the making of musical instruments. Many properties of wood makes its choice quite obvious. Most prominent is that its strong and granular membrane possess a unique ability to vibrate throughout the entire spectrum of speech and music as well its entire dynamic range (from **ppp** to **fff** or very soft to very loud) with resounding sound intensity. In addition, it vibrates in authentic fashion in sympathy with the induced force of vibrations without distortion or artifacts in genuine Hi-fi mode.*

Chapter: 38 Chord progression

This provides additional insight. The chords themselves have emotional or expressive content inherent in them. Chord progressions are a series of two or more chords used in a piece of music. Almost just as for melodies use tones out of 12 chromatic notes in different combinations of pitch and note values, chord progressions offers limitless possibilities. Together with the melody, they contribute in setting the mood and character of the song. A certain chord at a certain point in time in a chord progression can change or accentuate the sentiment and expression of the song, from happy to sad, vice versa or in many other ways with appropriate chord choices. It can be felt through the singer/player and audience alike. The chord progressions have even more power to convey a complex array of emotions and musical ideas. Because of these potentials many song writers and composers start their work with a chosen chord progression. There's no real rules for progressions, it's largely chosen from auditory perception!. Often, the song writers do it by trial & error and by experimentation. Roman numerals are used in the order and description of chord progressions.

Significance of tonic

The tonic is the particular note and the chord built on it on which the music is stable and at rest. It's also the tonal center. Melodies and chord progressions are pulled towards it after all the musical movements have taken place. The music tends to come back home to its tonic note or chord to 'roost'. Typically, music starts on the tonic, departs, moves up and down, laterally, and cyclically; creates effects; evokes emotion, but after doing all these things, must eventually return to the tonic.

Tables, charts & illustrations:

Chapter: 39**Some observations on music of the world**

It is a known fact that the western music is more structured, documented and well explained to such an extent that an avid music enthusiast can self- teach to a fairly appreciable level. Resources are available in plenty to make the task achievable with some earnest efforts. However, the same cannot be said about the Indian music. The main Indian music has at least 2 main styles or systems. One known as Hindusthani music as practiced in North India and the other Carnatic music as practiced in South India. All have 7 distinct notes /tones and 12 semitones and uses the same keyboard organization. In Indian music, the notes / pitch unlike the Western musical scale is not 'equal tempered', in that it does not have a constant logarithmic relationship to the next note. It seems that the Indian musical note has no assigned name to a particular key / note and assumes differing positions in different scales & modes. It may be more similar to the asymmetric minor keys where ascending and descending orders are different. The Indian classical music is prolific in scales, modes and rhythm patterns; it is amenable to improvisations and therefore always distinct to a particular performance.

The music scale and Rhythm structure vary greatly in Indian music and almost always learned from an accomplished music Guru the "Bhagavathar". Years of practice and training are need to perform Ragas & Kirthens which are somewhat equivalent to the Western music of concertos, sonatas, symphonies and other classical compositions. The Rhythm of Indian music is much more complex and have many partial divisions. In Western music, the main Rhythms are March (4/4,) Waltz (3 /4) and other variations of the basics. The accent is always implied in them.

Chapter: 40**Accordion jokes**

I heard a number of jokes, mostly cynical about accordion, from comedians, jokesters & pranksters who enjoy a momentary curtsy applause, or a grin from their audience of people looking for a light laugh and a good time. Comedians simply look for some rhymes, not facts; they find mostly something derogatory; dwell on any insignificant or superficial impression to make people think it is perhaps a new discovery of some sort.

Chapter: 42**Care of accordion**

By know it is pretty clear that an accordion is a very sensitive musical instrument just as many others. It is also relatively expensive. It has to be always kept in its box under environment -friendly conditions devoid of excessive moisture, heat, cold, dripping water, rains, dust, smoke, cooking aroma and debris as well as away from air vents, entrance ways and corridors. Mostly, the instrument, by design, is well protected from external elements. The most sensitive items are the reeds. They are originally precision tuned under actual playing conditions. Rust, heat, moisture, etc can alter its weight and dimensions ever so slightly which unfavorably affects tuning. For these reasons, the accordion should not be exposed to direct sunlight or damp conditions. Also, it should not be left stored and hidden without playing for long periods of time. It needs air to circulate through the bellows and inside components. Every time it is used, it has to be examined, checked out for dust, debris, particles, even for pests trapped or living inside the box. It's only common knowledge that flies, bees, bugs, wasps, crickets, termites, and fabric-eating pests like to nest in cozy, enclosed places.

Chapter: 43**Selecting & Buying accordion**

Under normal conditions, a well made acoustic accordion has long years of durability and trouble free use. They produce sounds the musicians are closely familiar with, even when using different instrument voice registers. All items & parts are made of light metal and treated/carved/shaped/ sturdy wood

materials. A good accordion is judged by its sound quality, airtight chambers & bellows, smoothness, quietness of its keyboard and bass mechanism, operational performance and workmanship. For a number reasons, people buy used accordions. There are many things to know and a number of facts to be considered in the process:

Chapter: 44 *Tips for better playing*

First let's recall the basic things:

that the notes of a scale are often referred to as **scale tones**. This is basically to distinguish them from the other chromatic notes which are not part of the given scale.

The **root** is like home and is a safest place to return to!

Any chord made entirely from scale tones within a scale is likely to suit a piece of music in that scale. But the idea is not to stick with the same chord. Music needs variety, tension and movements to be interesting enough.

*Since there are 7 different notes in a heptatonic scale, theoretically 7 triad chords can be created making each of the note as a root note and selecting appropriate combinations from the rest of the notes in the scale. The **primary** chords (I, IV, V) built on the **first, fourth, and fifth** degrees of the 7 note diatonic scales are the 3 most commonly used chords in **Major** scales as they work well together; the other 4 that are left out, the 2nd, 3rd, 6th, 7th are **secondary** chords. Secondary chords add flavor and variety to the music; expand the harmonic structure wider and help create additional flavors.*

Chapter: 45 *Some tips towards further simplifications in playing the bass chord buttons*

This section calls for a systematic approach beginning with a closer look at the music sheet and getting an idea of the nature of the music. The graphic depiction of the notes provides certain quick visual information besides the details. It shows the 'dynamic range' of the music; repeat signs, repetitive recurring sections and other clear markings which are consequential.

Determine the key signature & Time signature

Distinguish clearly between Major & minor scales

identify parts of the song: "prelude"; 'refrain' & "finale"

device a 'fingering' **scheme**, if not already given

notice the phrases & patterns; practice melody, then the chords

Chapter: 46 *Basic comparison between Western & Indian Carnatic music*

Using my limited knowledge of Indian music theory of ragas and modes, I venture ahead to provide a few simple observations into the two diverse styles of music. Hopefully, it may lead to applying harmony and chords which will certainly help Indian accordionists to play chords on accordion.

Tuning: Shruthi / equaltemperament; Thaata & mela; Thaata scales; Komal, Thivra

Notation in Indian Music

There are two basic ways to write music -Staff notation and script notation.

Western music uses the Staff notation. The script notation is common to Carnatic music. In script notation, music is written on straight lines. The pitch, intervals and related measures are indicated by using additional symbols.

Alphabets are used for the Solfa syllables: s r g m p d n

a comma is used to represent one aksharam or unit time : S , R , G , M , P , D , N ,

Short Horizontal line on top of the swaram is used to indicate its time duration as Half note; two lines on top denote a quarter note and so on: $\overset{_}{_}$ for Half note; $\overset{=}{=}$ for quarter note.

This may be considered similar to the beamlines used in triplets (connected notes of short duration values) in Western music notation.

A dot on the top of a swaram indicates that it belongs to the higher octave and a dot below the note indicates that it belongs to the lower octave: $\overset{\cdot}{G}$; $\underset{\cdot}{R}$

absence of a dot indicates the note in the middle octave.

Only the 2 listed scales seem to have some resemblance to Western Major scale:

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