

# **Innovations**

## **Evolution of Saroj Veena: a folk Musical Instrument of North East India**

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### **Abstract**

*There exist number of musical instruments in the world; each has its own melody and recognition techniques. Music is important to the Tripuri people of North-East India and Bangladesh since it is directly intertwined with their socio-social existence. The Tripuri clans' instruments and music claim their wealth and profundity of imaginations related with the entrance of the primary note. They often try to retain rhythm and tempo while travelling by hitting a drum. Tripuri's folk music is known as Tipra Bharat. The clan's music is as ancient as the clan itself, and it has continually served as a convention. Tripuri people tunes, like all other people melodies from other zones, are commonly shared among the general population. These tunes were composed by people whose personalities were unknown and overlooked during the start of their lives. Old customs, ideas, wishes, love, the evolution of jhum, collecting, festivities, convictions, superstitions, and so on all influence people's music. The musical theme has remained unchanged over time, and society tunes are still performed by people surprisingly and excitedly in their original form or with minor variations. Individuals from Tripuri undertake a variety of traditional rituals. As a result, after some time, the next generation no longer uses many of these technologies, and they are being phased out of the world. Many people in Tripuri are currently unaware of the names of such instruments or their presence. These instruments are not perceived by a substantial section of the younger generation. Some instruments are specifically designed to cause individuals to change their behaviour. In this paper we will discuss about the scientific structure, shape and playing method of sarojveena.*

**Keywords:** 1.Chikari, 2.fretboard, 3.Tumba, 4.Pickup, 5.String.

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### **Introduction**

Tripura is a state of India that has produced a wide variety of folk music. The musician HemantaJamatia gained major renowned beginning in about 1979, when he became a musical representative for the separatist Tripura National Volunteers. He later on surrendered and returned to normal life, dedicating his work to the folk music of the Tripuri people. In recognition of his contributions to folk and modern music in the Tripuri language, he was awarded the highest honour in the field of music by the Government of India's SangeetNatak Academy. Musical Instruments of Tripura are made of materials that are available locally. The people of Tripura have a respect for the strong natural forces and try to pacify animistic spirits and the local gods. These instruments are made of bamboo, skin, wood and animal horns. It is believed that each of these musical instruments have a potential of conferring material benefits. Musical instruments of Tripura are a vital part of the traditional folk music of the region.

**Evolution of Hindustani Slide Guitar:**

Pandit Brijbhushan Kabra, a disciple of Sarode Maestro Ustad Ali Akbar Khan, in his early 20s, introduced Guitar as an Indian Classical instrument and raised it to the concert level and recording purposes. Thus he became the Pioneer of Indian Classical Guitar. He changed the string arrangement from 6 strings to 3 or 4 strings as main and omitted the 5th and 6th regular strings, and in 1959 added 2 chikari strings. He initiated tuning the first string D, second string A, third string D, fourth string A and the method of playing the chikari with the thumb and the main strings with the index and middle fingers. No other Indian Classical Guitarist was known to have done that at that time.



**Hawaiian Guitar**



**Indian Slide Guitar**



**Hawaiian steel Lap Guitar**

(1). Model: Devangu - 10 String



10 stringed 2 Chikari in the front solid wood made, hollow neck, simplest and specially made Indian Slide Guitar, Body and acoustic designing by PanditDebashish Bhattacharya.

**(2). HansaVeena:**



**HansaVeena**

The sheer genius of Pandit Ravi Shankar, who so far had created ragas, a host of superb musical compositions keeping the whole world enthralled, has now given a new vent to his creativity. On 7th April, 2000, Panditji unveiled to the world of Indian classical music a new instrument, christened by him as the HansaVeena. Vishan Das, the proprietor of the famous Instrument maker, M/S Rikhi Ram and Sons of Delhi, has worked sincerely to make this instrument under the constant guidance of Pandit Ravi Shankar. The instrument Pandit Ravi Shankar unveiled at a ceremony organized in Delhi at his place on his 80th birthday, is an evolution of the Indian classical guitar. Same evening, the launching of the HansaVeena was done by his senior disciple Barun Kumar Pal. Apart from playing sitar for more than six decades; Panditji has been working with several others Indian and western Instruments, deeply analyzing their characters for their best utilization. Panditji had now conceptualized and implemented several brilliant basic modifications to the guitar played as Indian classical instrument, to make a complete and compact instrument that could competently render the delicate nuances of ragas.

A totally new Indian instrument is born. He makes a historic addition to the world of Indian classical Instruments. Later, the HansaVeena was officially launched at different places of India, UK, Singapore, Canada and USA. National and international TV channels reported the news with Barun Kumar's concerts and lecture demonstrations on this instrument.

Newspapers like Times of India, Telegraph, Hindustan Times, Statesman, Business Standard, SambadPratidin and others covered launching events of HansaVeena organized by RajyaSangeet Academy (West Bengal Govt), Salt Lake Cultural Association of Calcutta, Aurobindo Ashram of Pondicherry and Auroville, Indian Embassy of UK, Ramakrishna Mission Institute of Culture, Kolkata and others. Within a short time, thHansaVeena has become a very popular Instrument for its beautiful tone and wider recognition.



### Barun Kumar Pal

The playing technique of this new Instrument has some similarities to Indian classical guitar (slide guitar). But the structure, shape, material of construction and above all the quality and tone of the sound production is more akin to the VichitraVeena. It is played using a slide on the left hand and special plectrums on right hand fingers. Apart from the regular fretboard of a slide guitar, everything in this instrument is indianised. The Instrument is made out of a single piece solid wood. It has a semi flat sound chamber like the Tambura and Veena. It has five playing strings, one supporting, three *chikaris* and 13 sympathetic strings. The edge of the hollow neck or fretboard is beautifully curved to resemble the neck of a swan. Like the veena, sarode and sitar, the tuning keys are made out of wood. Above all, the tone of the Instrument is more like the veena, very smooth and well balanced. Like VichitraVeena, the beautiful sustained tone helps an artiste to play in the real *gayaki* (vocal) style. The position of the notes is marked with inlays for easy playing.

### (3). Mohan Veena:

A Mohan veena is either of two distinct Indian classical instruments: a modified sarode created by the well-known sarodiya Radhika Mohan Maitra, or a modified Hawaiian guitar created by Vishwa Mohan Bhatt.

### Vishwa Mohan's instrument



Mohan Veena

Indian stringed instruments have undergone many changes throughout history. Many western musical instruments like violin, harmonium, mandolin, archtop guitar and electric guitar have come to be accepted in Indian classical music. Vishwa Mohan Bhatt developed and named this hybrid slide guitar and has been added to the list of Indian classical instrument. Vishwa Mohan Bhatt also known as V. M. Bhatt (born 27 July 1950) is Grammy-winning Hindustani classical music instrumentalist. Vishwa Mohan has mesmerized the world with his pristine pure, delicate yet fiery music. It is due to Vishwa's maiden mega effort that he rechristened guitar as Mohan Veena, his genius creation and has established it at the top most level in the mainstream of Indian Classical Music scenario, thereby proving the essence of his name VISHWA (meaning the world) and MOHAN (meaning charmer) and indeed , a world charmer he is. Being the foremost disciple of Pt. Ravi Shankar, Vishwa Mohan belongs to that elite body of musicians which traces its origin to the Moughal emperor Akbar's court musician Tansen and his guru the Hindu Mystic Swami Haridas.



### **Pandit Vishwamohan Bhatt**

The Mohan Veena is a highly modified concord archtop, which Bhatt plays lap-style. It has 19 strings: three melody strings and four three drone strings coming out of the peg heads, and 12 sympathetic strong to tuners mounted to a piece of wood added to the side of the neck. The melody strings are on what we would consider the treble side of the neck, and the drone strings are on the bass side. The drone strings are lower in height than the melody strings to allow for unrestricted playing of the melody strings. The sympathetic strings run underneath the melody and drone strings to yet another level in the bridge. The instrument has a carved spruced top, mahogany back and sides, a mahogany neck, and a flat, fretless, rosewood fingerboard. The Mohan Veena is under tremendous tension; the total strings pull to be in excess of 500 pounds. It is due to this high tension the tone tuns incredible with the sympathetic ringing out and strengthening each note played. This is a loud instrument made to cut through with low amplification.

The Mohan veena is a modified slide guitar with an excellent sound, sympathetic strings and unique playing options. It is traditionally held like a Hawaiian guitar, being placed flat in one's lap. The melody is articulated on the left by means of a heavy polished steel cylinder slide without pressing the string down - the weight of the slide is enough to get a clear sound. The slide is freely movable along the playing strings, facilitating the typical sliding melody fluctuations, which guitarists know e.g. from bottleneck playing. The Mohan veena is plucked on the right side, using finger picks.

Even when unamplified the Mohan veena has a powerful full sound, which is particularly enhanced by the silvery overtones of the sympathetic strings and drone strings. The Mohan veena offers all possibilities of differentiated melodic and rhythmical play common in Indian raga music, providing many possibilities in other music styles as well.

**Another Types of Mohan Veena:**



**Other types of Vishwa Mohan's instrument:**



**Vishwaveena**

**(4). SatvikVeena:**



Salil Bhatt is an **Indian slide guitar** player. He is the son of the fellow slide player and **Grammy Award** winner, Padmashree Pt. **Vishwa Mohan Bhatt** . He has created a new Veena which he has named as the SatvikVeena to meet the requirements of depth, richness and continuity in his dynamic style of rendering the classical ragas. **Mohan Veena** was created by pt. **Vishwa Mohan Bhatt** 41 years ago and is hailed as a unique discovery in music scenario. Salil has received accolades for his soulful and vibrant music, has created this new Veena for the innumerable variations of his 'Baaz' (style), which assimilates the Gayaki and Tantrakari styles, the vocal as well as the instrumental styles respectively. Salil specializes in playing high-speed taans, stroke and stroke less taans with equal

mastery. This new Veena named SatvikVeena is made of a 100-year-old oak wood block, its top made of pinewood to let the sound filter and resonate. Two f - shaped sound holes to provide the easy emergence of sound. The Fret board is made of rosewood. The instrument has nineteen strings in all, including three for main melody, five for drone and twelve sympathetic strings. The very specially created wooden tuner keys are mounted on the extended piece of the fret board; these keys are placed on tuning machines that are concealed.



The position of the keys at the head, standing upright, breaks the traditional mould of horizontally placed keys. The head of the new Veena is shaped like a crescent and rises above the plane of the body. Just beneath the head is placed the toomba (gourd), which is attached to provide base and a better grip when the instrument is played on lap. Salil has been giving solo concerts for more than 25 years and has performed all over the country as well as abroad in Canada, USA, UK, UAE, Europe etc. Salil represents the tenth generation of the famous Bhatt lineage of classical music artists. Salil reflects the dynamic style of rendering the classical nuances on the SatvikVeena in his concerts. His style incorporates the authentic and systematic exposition of Classical Indian Ragas and the embellishments of the World Music as well. Salil's baaz [style] assimilates the 'gayaki' [vocal] and 'tantrakari' [instrumental] representations which makes his playing complete with innumerable variations. Salil specializes in playing high-speed taans demonstrating his great skill on the SatvikVeena. Trained by his mentor Pt. Vishwa Mohan Bhatt, Salil follows the Classical Indian Raga authenticity to its strictest norms and creates the purest picture of every Raga he plays.

**(5). Shankar Veena:**



Kamala Shankar is an Indian classical **slide guitar** musician and Innovator of Shankar Guitar. She has employed a unique **Gayaki** style (also Tantraki) for more than 30 years. She was born in 1966 in the **Tanjore** district of **Tamil Nadu**.

Basically a Tamillian, born in Tanjore and brought up in Varanasi, Kamala's musical journey started with the training in Vocal Music, initiated by her mother at the age of six under the guidance from Pt. Amarnath Misra of Banaras Gharana. Later on she picked up Indian Classical Style of Guitar at the age of twelve and blossomed to be a true artiste under the valuable guidance from Pt. Chhannoolal Misra (Varanasi), the renowned vocal maestro of Kiran Gharana and Pt. Bimalendu Mukherjee (Sitar maestro), a doyen of Imdadkhani Gharana in a Guru-Shishya Parampara style.

Dr. Kamala Shankar belongs to an elite and exclusive class of musicians who have Master in Science and Doctorate in Music from Banaras Hindu University, India. In spite of qualifying to study Dental Sciences, she chose music as it came to her naturally. She has attracted worldwide attention by successfully converting the Western Hawaiian Guitar into Shankar-Guitar which has overtones of classical Veena unlike its western cousin. Innovative design and shape by adding more strings and sympathetic strings to get the sustained, sliding notes common to the vocal style of Indian classical music. The instrument is now a hybrid of a classical Hawaiian guitar and a classical Indian sitar.



Dr. Kamala Shankar has worked on the Hawaiian guitar and created an instrument that can lay claim to features that make the sitar and the sarod so popular with the classical musician. Shankar's guitar is made from a single piece of hollow wood, and has no joints. Meend over matter Dr. Kamala Shankar of Varanasi takes a step forward in adapting the guitar to Indian classical music. The guitar, like the violin, came to India from the West. It has found innovative practitioners, like Brijbhushan Khabra and Vishwamohan Bhatt, who have coaxed Indian classical music out of it. Yet the guitar is nowhere as popular as the violin on the classical music circuit. Invariably, its capacity for playing graces is compared with that of the sitar and the sarod, and the Western import is found wanting. Its tone cannot match the deep-toned dignity of the sarod or the fluid lyricism of the sitar.

Dr. Kamala Shankar, well-known guitarist who plays Hindustani classical music, has designed a new instrument that seeks a better status for the guitar. Her instrument lays claim to some of the features that make the sitar and the sarod so popular with the classical musician.

Shankar's guitar is made from a single piece of hollow wood, and has no joints. Wood knobs replace the normal steel ones. The tarabs (sympathetic strings) are an addition, and they too are strung from wooden knobs. Shankar's guitar looks like the normal guitar, but one end gets a lotus leaf design. The instrument has four main strings, four chikari strings and 12 tarabs. "The most important feature is its pure and natural tone," says Kamala Shankar. "It overcomes the problem of metallic sound that used to make Hindustani classical guitarists unhappy."

In the earlier guitars she used, Kamala Shankar says, the quality of wood - ply mostly - was poor, and the joints were not stable, resulting in the scales going offkey. This was what prompted her to modify and innovate. So how is Shankar's guitar different from Vishwamohan Bhatt's innovation, the Mohan veena? "My instrument has a fully hollow body, a thicker sound board and base, and the walls are made of solid wood. The Mohan veena uses plywood," says Kamala Shankar.

Pandit Rajeev Janardan, eminent sitarist and Kamala's husband, looked closely at the normal guitar, and came to the conclusion that a sitar designer may be able to overcome its drawbacks. That decision took them to Bishan Das Sharma of Rikhi Ram Musical Instrument Manufacturing Company, Delhi. "He is a very reputed instrument maker who makes sitars for Pandit Ravi Shankar, Ustad Vilayat Khan and other big artistes. He was kind enough to cooperate with us, and design a guitar just for me," says Kamala Shankar.

She feels the new instrument achieves better sustain than other guitars. "The sitting posture becomes comfortable because of its flat base throughout, and the strong, single-piece structure holds the tuning better and makes the instrument crack resistant." Jerks or minor mishandling, she feels, will not badly affect its performance. And above all, it has an "Indian touch" to its tone which "our ears are so used to". To acknowledge that it is a modified Western instrument, Kamala Shankar has retained "guitar" in its name and not changed it to veena.



#### (6). Debashish Bhattacharya's Guitars

Debashish Bhattacharya (**Bengali**: দেবশীষভট্টাচার্য, **Hindi**: देवश्रीषम्ट्टाचार्य, Born 12 January 1963) is an Indian classical musician, singer, composer, introducer of first Slide Guitar Syllabus of the world, redefined Indian classical music on slide guitar through introducing new technique, new sound and new blend of tradition and unique contemporary designing of the music. A music producer who plays **lap slide guitar**, he has taught more than a thousand students, created a new genre (Hindustani Slide Guitars), Chaturangui Anandi and Gandharvi and performed in more than two thousand concerts and workshops, with Grammy nominations and several world music awards. His latest work is first ever slide instrument in the world with skin on top Pushpa Veena, copyrighted (patent pending). For Hindustani Raag music he has composed three new Raag, set to evening time Raag Palash Priya, Raag Shankar Dhvani and Raag Chandra Malika.

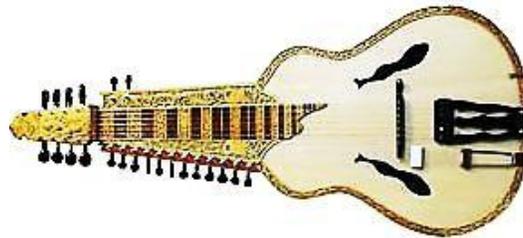
Bhattacharya was born into a musical family in **Kolkata**, it became apparent that Bhattacharya was skilled at a young age. His parents, both traditional Indian vocalists, gave him a basic understanding of music and he first began strumming a guitar at age three, when his father gave him a full-size Hawaiian **lap steel guitar**. He made his debut at the age of 4 on **All India Radio**, in Calcutta. At age 15 he designed his first Chaturangui and created a genre called

Hindustani Slide Guitar. At 20, he was awarded the President of India Award for winning the National Music competition of All India Radio. At 21, he left his carriers and his parents for ten years to study under the pioneer of Indian slide-guitar [BrijBhushanKabra](#). His contemporaries composition started getting attracted by musicians and music lovers as well his new designing 14 string Gandharvi slide guitar brought a new lap Slide guitar in the world. In the year 1993 He has started performing extensively around the world. 2000-2001 He performed with Remember Shakti Band of John McLaughlin, ZakirHussain and Mandolin U Shrinivas 2002 He created another Slide guitar a blend of ukulele and mandolin and named it after his Daughter. His constant focus of past thirty years or more has been to give ideas of new music and new instruments made him really popular among traditionalists as well contemporary new thinkers of music. He has collaborated with many world-famous musicians of different lands and cultures, making his career as a slide guitarist unique so far.

His originality as a musician has earned him global admiration, and he has performed on networks all over the world. He has attracted attention to the slide guitar and Indian classical music within India and globally. Today he has more than 2000 students in India and other countries, and thousands of musicians, music directors, teachers, and followers who have been led to the new language of old traditional Indian music of Debashish. He invented his own slide-guitars, unique to his compositions, which he calls the "Trinity of Guitars". These hollow neck instruments are the 24-string chaturangui, the 14-string gandharvi and the anandi, a 4-string [lap steel ukulele](#). He opened a new Universal School of Music in Kolkata, India, where he teaches students from all over the world the principal universal form of Indian music and special course of Guitar. The school is a non-profit organisation, works for restoring music, musician and traditional art. His most popular albums are: Mahima with [Bob Brozman](#), and Calcutta Slide-Guitar, Vol. 3. Both of these albums are on Riverboat records and ranked in the top 10 of the Billboard World Music Charts. He was nominated for a 2009 [Grammy Award](#) in the category of [Best Traditional World Music Album](#) for his album Calcutta Chronicles. Debashish recorded his first Global Fision album in 2012, released in 2013, featuring John McLaughlin, Jerry Douglas and his daughter Anandi Bhattacharya. In 2015, he released Slide Guitar Ragas from Dusk Till Dawn. First collaboration of Indian and Hawaiian music album, Hawaii to Calcutta brought him world music award 2017. Debashish Created new lap guitars in 2015, 2016 and 2018. In 2018 he produced his daughter Anandi Bhattacharya's first music album, Anandi Joys Abound.

Guitar maestro Pandit Debashish Bhattacharya evolves into a global inspiration in the arena of contemporary musical uprising. The musical journey is a counterpart to what remains a fond reminiscence of a child's fancy with a Hawaiian lap guitar at the age of four. The multi-dimensional intrigue of invention became a passion with the making and widespread recognition of the patented Chaturangui (a 24-string hollow neck guitar), Gandharvi (a 14-string guitar which holds the longest glissando) and Anandi (a 4-string slide Ukulele) which not only excels in sound variety and quality but has become the designer's choice.

#### (6.a) ChaturanguiVeena:



In Sanskrit Chatu means four and Ang means attribute. Chaturangui is a guitar with an additional blend of four tones. This guitar is 24 strings hollow neck Indian Classical Guitar having Gourd in the neck. Being the first of its kind in the Indian Classical Guitar genre, it blends the tonal resonance of Rudra-veena, Sarode, Violin and Sitar, keeping intact the original sound of Guitar.

The inspiration of such a guitar, which has a traditional Indian look, came to Debashish Bhattacharya from the structure and tone of the Weissenborn, which he also plays with equal deft.

**(6.b).Gandharvi:**



The tone of this guitar is a blend of Saraswati-Veena, Santoor, Acoustic 12 string Guitar and Sarengi. DebashishBhattacharya, while designing the guitar, has related its tone to the sound and resonance of the cosmic world.

Such realization happens when we hear the octave strings. But when one slides on the guitar, one derives an extra celestial energy from the tone. The inspiration of the Gandharvi Guitar is from the beauty of the goddess of the GandharvaLoka. This guitar in particular holds the longest glissando.

**(6.c).Anandi:**



DebashishBhattacharya thought of this guitar in line with the western concept of Slide Ukulele. The exotic folk-like tone Anandi delivers is derived from a small baby 4 string Slide Lute. Signifying “Joy of Music”, Anandi has been conceived and designed by DebashishBhattacharya to infuse a light hearted mood amongst his listeners after a serious Raga recital.

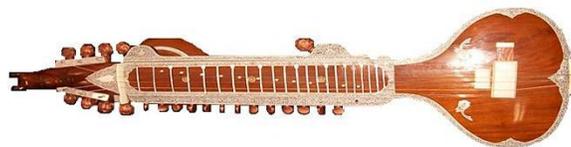
**(7). TriveniVeena:**



TriveniVeena is a **plucked string** musical instrument invented and patented by PanditNiranjanHaldar along with Pandit Kamal Kamle. PanditNiranjanHaldar is a retired senior Grade-A artist from All India Radio (Indore MP - India). He has more than 40 years of experience in Indian and **Western classical music**. He has presented VichitraVeena and Guitar at various concerts and several events for Akashvani, Doordarshan and SangeetNatakAkademi.

After inventing RanjanVeena he researched with various instruments to come up with a unique instrument. It was named TriveniVeena because it combines 3 materials (metal, wood and leather) and produces mixed tone of 3 instruments (Sarod, Veena and Guitar). There are 4 melody strings, 2(right) + 4(left) Chikari strings to maintain Scale with Rhythm and 11 sympathetic strings. It is medium in size but produces a loud sound with long sustenance and sweet tone. It is played using a steel slide just like Hawaiian guitar. On the TriveniVeena, an experienced musician can play all the Indian Classical Instrumental techniques –Meed (Slide) Gamak, Krintan, Gitkari etc. and the fast Taans too.

**(8). RanjanVeena:**



**RanjanVeena** is a plucked **string musical instrument** invented and patented by PanditNiranjanHaldar, a retired senior Grade-A artist fromAll India Radio (Indore, India). Haldar has more than 40 years of experience in Indian and Western Classical music and has performed at various concerts and events such as **VichitraVeena** for Akashvani, Doordarshan and SangeetNatak Academy. He drew inspiration from VichitraVeena.

After a decade of work he created a smaller musical instrument with a unique tonal quality that is a combination of the **veena, sitar, and guitar**. The instrument is played with picks on fore-finger, middle-finger and thumb. On the RanjanVeena, an experienced musician can play all the Indian Classical Instrumental techniques: Meed (Slide) Gamak, Krintan, Gitkari and the fast Taans.

Structure of RanjanVeena:

- Type: finger picking instruments
- Picks: 2 Finger Picks, 1 Thumb Pick & Stone/ Glass slide
- Size (L\*B\*H): (1100mm X 330mm X 150mm)
- Weight: 3.6 kg (7.93 lbs)
- Main Strings: 5; Secondary/ Chikari Strings - 4; Sympathetic Strings - 12; Octave Range - 4
- Tuning Knobs: 21 (Indian design with guitar-like mechanism)
- Fret: with 19 reference frets.



**(9). SwarVeena:**

PrakashSontakke belongs to the illustrious Gwalior Gharana. His father Dr. RB Sontakke is one of the senior most disciples of PandittOmkarnath Thakur and his mother Dr. Mani Sontakke is the disciple of PandittLalmani Mishra and his parents were his gurus. Prakash prefers to play the GayakiAng (vocal style) which recreates the emotion of the human voice on the slide guitar. He is the recipient of the prestigious Aryabhata Award, GanayogianchakshariGawai Award & Dr. PuttarajGawai award.



He has innovated this instrument called “SwarVeena” on which he can play the Indian Raga Music as well as western sounding style. A combination of the SwarMandal and the VichitraVeena on the Indian style and it also produces sounds closer to the Dulcimer, Resophonic Guitars and the Dobros and the King of all the Lap Steel. He has been greatly inspired by musicians like Guitarist Jeff Beck, Bob Brozman, Joe Wright, Ben Harper, Stacy

Phillips and Pandit Vishamohan Bhatt and Pandit Debashish Bhattacharya. He also performs on his customized “TEAR DROP WEISSENBORN” made by Bill Asher Asher Guitars California apart from a Paul Beard signature “Dobro”. Performing Hindustani Classical Concerts on the Weissenborn and Dobro open a totally new chapter owing to the different Textures and resonant sounds of these instruments. Prakash has to his credit more than a few hundred National Broadcasts which were received very well and were critically acclaimed. Prakash prefers to play the GayakiAng (vocal style) which recreates the emotion of the human voice on the SwaraVeena. Prakash performs solo and with numerous bands and musicians in major concert circuits in India and internationally.

#### (10). Sarasvani

Sri Subhash Chandra Ghosh invented the Sarasvani. The Sarasvani was launched in 2003. It is made of a unique combination of Sitar, Sarod and Guitar, made from a single piece of wood and based on acoustic sound. Sarasvani signifies the melody of “White Lotus” and is redolent of lifetime memorable experience; a divine moment of pure harmony and it covers all the areas of imagination of Indian classical music.

#### (11). Swar Ragini

Sri Subhash Chandra Ghosh invented the SwarRagini after he found some drawbacks and limitations with the Sarasvani. SwarRagini, a unique instrument made from a single piece of wood combining the Veena, Sarod and Guitar. The SwarRagini was launched in 2011. The instrument signifies the ShringarRaas of music and melody with a compact bold sound and gayaki like human voice. SwarRagini, A highly decorative instrument.



#### (12). Pushpa Veena:

Pandit Debashish Bhattacharya, who is often called the best slide guitarist in the world, introduced his latest musical instrument, the ‘PushpaVeena’ to the world at the India International Guitar Festival. In a world where traditional music is attracting lesser listeners, students and musicians, PushpaVeena has emerged from the urge to fill up this void and strengthen the traditional music world.

The ‘PushpaVeena’ is an acoustic instrument, which is a scale up version of all the previous creations of Pandit Debashish Bhattacharya – Chaturangui, Anandi and Gandharvi. It represents the ancient art of classical and folk music of the world as well as India and Asia at this time, when the appreciation of Classical, Spiritual and Folk music is fading away. The sound and energy generated by the strings and structure of the Veena is connected to Vedic, Buddhist and other older schools of art and musical spirit. The 25 stringed Veena is played with slide keeping it upon one’s lap.



### (13). Siddha Veena

Siddhartha Banerjee One of the serious, young exponents of Indian Classical Music, who constantly endeavors to infuse interest and respect for this traditional art form in the heart and the minds of the younger generation. Siddhartha is a creator of Siddha Veena (Modified Slide Guitar), He started performing at the tender age of 11, since then he never looked back. Where others have performed Ragas, Siddhartha has created Ragas. Where others have played compositions, Siddhartha has written compositions. Siddhartha Banerjee has given “MaiharGharana” a brand new flavour with his unique and magical Instrument ‘Siddha Veena’. About Siddha Veena: Siddha Veena is a stringed musical instrument equally adept at interpreting Indian Classical Music and World Music. It derives its name from its inventor, Siddhartha. Its sound resembles that of VichitraVeena, Sitar and Sarod, though with its own special character. It is a highly modified Slide Guitar which Siddhartha plays lap style. The instrument has 21 strings: 4 melody, 3 drone, 2 chikaris and 12 tarab (sympathetic strings).



As a child prodigy with music inhaled through the breath of his mother Late Jaya Banerjee. Siddhartha has blossomed under the finest tutelage of Virtuosos Dr. Shibnath Bhattacharya, Pt. Narain Das Chakraborty and Pt. Amit Bhattacharya through arduous training, Siddhartha has mastered Dhrupad, Khayal and Tantrakari styles equally well. His recital is always a rare treat combining Dhrupad and Khayal Gayaki, melodious Alaap, scintillating mastery, innovative improvisation with mesmerizing Layakari and dexterous finger work.

**(14). Poly String Guitar (BahuThantriVeena):**

Poly Varghese, a Hindustani musician and Mohan veena player disciple of great musician Pandit Vishwa Mohan Bhatt. He is also an actor, poet and an activist. Poly Varghese was initially trained at Kerala Kalamandalam, Kerala's paramount center for training in classical arts. He specialized in Mridangam, the main component of percussion in southern classical music. He pursued his quest for music at ViswaBharati University, Santiniketan, in the north eastern state of India, West Bengal, where he took full advantage of a unique opportunity to learn stringed and percussion instruments. His growing interest in RabindraSangeet and love for Hindustani classical music prompted him to specialize in Hindustani music on electric guitar. A chance meeting with guitar maestro Viswa Mohan Bhatt saw Poly's introduction to the Mohan Veena. From that moment onwards Poly dedicated all his energy and resources towards learning and practicing the Mohan Veena under the guidance of his new and highly revered teacher. The guidance and tutelage of Pandit Bhatt provided Poly with clarity in perspective and practice, to the point where he is now emerging as a master of the Mohan Veena with his own inimitable style of improvisation. While perfecting and pursuing the depths of music, Poly is now composing and performing his own creations. Poly Varghese now has many concerts to his credit both in India and abroad, including the Gulf States and Europe. Poly's unique experience and experiments in creating music have also propelled him to develop the 40-stringed, three-neck guitar which he named the Poly String Guitar (BahuThantriVeena). This guitar is designed as a three neck guitar and it is unique because all the tones of Indian classical music can be expressed at the same time in this instrument. Moreover there has not been any Indian string instruments having 12 octaves. These 12 octaves demonstrate the 3 characters of Indian classical music. The three necks (finger board) are the bass neck, lead neck and the high neck.

Poly Strings Guitar can be called as the conglomeration of 4 musical instruments namely the tarab and the three finger boards. This guitar is equipped with four electric pick ups which are unique and distinct in its own way. the pick up used for the bass neck is designed to give an acoustic feel the tarab pick up is entirely different to the three pick ups because tarab expresses the natural tone of all acoustic instruments and for this purpose alone was the pick up created . When listening to the tones of the tarab one can listen to the tones of the sitar and the MohanaVeena. The connection of these four pick ups are embedded in an electronic mixer which is part of the guitar and this mixer helps in complementing and enhancing the tones.

1]. Bakshi, Haresh. (2002). "Soundofindia."2002, 2003. [www.soundofindia.com/showarticle.asp?in\\_article\\_id=-1760104438](http://www.soundofindia.com/showarticle.asp?in_article_id=-1760104438)

(accessed January 17, 2017).

[2]. Drummond (2001). "The Classroom Music Teacher -inspirations, aspirations and realities. The evidence from Northern

Ireland". British journal of music Education, Vol. 18, 5-25.

[3]. Gallagher, Darren. The Effect of Digital and Social Media in the Music Industry. November 2013.<https://theorganicagency.com/blog/effect-digital-social-media-music-industry/>(accessed September 1, 2017).

[4]. Hallam Susan, Andrea Creech, Hillary McQueen. (2016). "The Perception of Non-Music staff and senior management of the

impact of the implementation of the musical futures approach on the whole school."British journal of Music Education, Vol. 33,

Issue 2(2016): 133-157.

[5]. HoWai-Chung (2009). "The perception of music learning among parents and students in Hong Kong". Bulletin of the

Council for Research in music, No 181-(Summer): 71-93.

[6]. Kapur, Jay (2002). "Digitizaing North Indian Music." Princeton: University of Victoria,.

[7]. Khan, John Rahn and UstadImrat (1992). "An interview with UstadImrat Khan. "Perspective of New Music, 30(2): 126-145.

- [8]. Mathew, PravaSusy (2003). "Case Study: Impact of digitization on music industry in the recent times." International journal of Management and Social Sciences Research, 2: 12-13.
- [9]. Moro, Pamela (2004). "Construction of nation and Classicisation of Music: Comparative prospective from south east and south East Asia." Journal of South East Asian Study, 35(2): 187-211.
- [10]. Patke, Rajeev S. (2007). "Thinking Dialectically of north Indian Classical Music." In Music and Modernity, edited by Amlan Das Gupta, 32-59. Kolkata: Thema.
- [11]. Mehta, R.C. (2011). Indian Classical Music and gharana tradition. 2nd. New Dwlhi: Read Worthy, 2011.
- [12]. Raja, Deepak S. (2007). HinduastaniMusic :A tradition in transition. 1st. New Delhi: D.K. Printworld (P) Ltd.,
- [13]. Rice, Timothy. (2003). "The Ethnomusicology of Music Learning and Teaching". College Music Society 43 (2003): 65-85.
- [14]. Schippers, Huib (2007). "The GuruRecontextualized? Perspective on learning north Indian classical music in shifting environment of Professional Training." Asian Music38, no. No-1(winter-Spring): 123-138.
- [15]. Shapero, Dean (2015). "The Impact of Technology on Music Star's Cultural Influence." The Elon Journal of Under Graduate Research in Communications, Vol. 6(1): 20-27.
- [16]. Silver, Brian Q. (2000). "Music, Broadcasting, Recordings and Archives." In The GalrlandEncyclopaedia of World Music Vol. 5. New York: Garland Publishing Inc.,.
- [17]. Singh, Nivedita (2004). Tradition of Hindustani Music . New Delhi: Kanishka Publishers, 2004.
- [18]. VedabalaSamidha (2016). "Indian Classical Music in a Gblalized World" Sangeet Galaxy, Vol. 5, Issue-1: 3-9.
- [19]. Wetzal, Richard D. (2012). The Globalization of Music in History. 1st. New York: Routledge, 2012.
- [20]. Widdess, Richard (1996). "The Oral in Writing: Early Indian musical notations." Early Music from Around the World,24, no. 3 (1996): 391-402+405.

### **(15).Jaywant Guitar**

Jaywant Naidu and Mohammed Arif from Gibtone Guitar Corporation in Kolkatta have modified the Hawaiian guitar. When he embarked on this innovation, Jaywant was inspired by the layers of sound in a Western symphony. "This symphonic sound of a group of violins, flutes or cellos has always fascinated me and the urge to get the sound of more than one guitar while playing a single instrument was always there," he says.

The Jaywant Guitar has 21 strings with three pairs of main melody strings and three 'chikari' strings. The main objective of the instrument is to be able to produce the sound of an ensemble of Hawaiian slide guitars.



### Sarojveena's Scientific Study:

Indian stringed instruments have undergone many changes throughout history. Many western musical instruments like violin, harmonium, mandolin, archtop guitar and electric guitar have come to be accepted in Indian classical music. J Sarkar developed and named this hybrid slide guitar and has been added to the list of Indian classical instrument.

The origin of this instrument is Tripura, Gomati District. This Musical Instrument's playing technique has some similarities to Hindustani classical guitar (slide guitar). But the structure, shape, construction material and, above all, the sound production quality and tone are more similar to the VichitraVeena. It is played using a left-hand slide and special plectrums on right-hand fingers. Outside a slide guitar's regular fretboard, everything in this instrument is indianised. The Instrument consists of one piece of solid wood. It has a semi flat chamber of sound, like the Tambura and Veena. It has four strings to play, fivechikaris (three chikaris in the back and two chikaris in the front) and 14 sympathetic strings to play. Sympathetic strings are at the bottom of the playing strings. So that if we stroke the playing strings, a vibration is generated from the lower sympathetic strings.

Most of the Hawaiiin guitar bodies are made up of Mahagani wood, Ash wood. They also have different densities. Ash wood is approximately  $650-850 \text{ kg/m}^3$ . Mahagani wood is roughly  $500-850 \text{ kg/m}^3$  and Alder wood is approximately  $420-500 \text{ kg/m}^3$ .Sarojveena is made of Alder wood.



### Tuning And Stringing: SarojVeena

#### Playing Strings

1. d / Sa - Steel 0.35 mm
2. A / low Pa - Steel 0.50 mm
3. D / low Sa - Bronze 0.55 mm
4. Ati lower Pa-Bronze

### Drone Strings (CHIKARI)

1. c# / low shuddha Ni - Steel 0.27 mm
2. F# / low shuddhaGa - Steel 0.40 mm
3. A / low Pa - Steel 0.35 mm
4. d / Sa - Steel 0.27 mm
5. d' / high Sa - Steel 0.22 mm

### Sympathetic Strings (TARAF) - all Steel 0.22 mm

1. d / Sa
2. c# / low shuddha Ni
3. d / Sa
4. e / shuddha Re
5. f# / shuddhaGa
6. f# / shuddhaGa
7. g / shuddha Ma
8. a / Pa
9. b / shuddhaDha
10. c# / shuddha Ni
11. d' / high Sa
12. e' / high shuddha Re
13. d' / high Sa
14. High pa

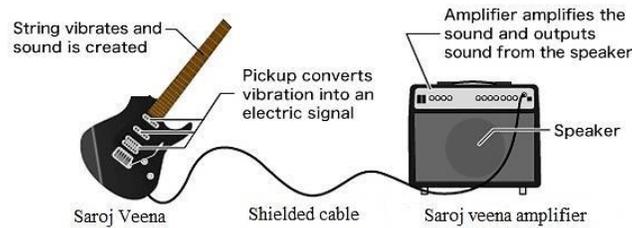
This tuning is based on a d-major scale (BilawalThata). For other scales (Thata) the sympathetic strings and occasionally also the 1st and 2nd drone strings are changed accordingly. The length of this instrument is 109 cm, width is 40 cm, and depth is 9 cm, diapason 65 cm and weight: approx. 2.8 kg. For improved sound sustainability and resonance a Chrome-plated Brass Tumba is screwed into the back of the neck.



The edge of the hollow neck or fretboard is well curved to resemble a Peacock's neck. The Instrument's sound is more like the veena, very smooth and well balanced. Like VichitraVeena, the beautiful sustained tone helps an artist play in the true (vocal) style of gayaki. The notes' position is marked with inlays to allow easy play. The SarojVeena is under tremendous tension; it pulls the total strings to be over 510 pounds. The tone tunes incredible with the sympathetic ringing out and strengthening each note played is due to this high tension. This is a loud instrument made for small amplification to cut through. An electronic device is attached to this musical instrument.



Sarojveena feature devices called pickups embedded in their bodies. Pickups convert the vibrations of the strings into an electric signal, which is then sent to an amplifier over a shielded cable. The amplifier converts the electric signal into sound and plays it. The tone and volume of the sound are also adjusted during this process. In other words, asarojveena requires an amplifier before it can really be considered to be an instrument for playing music.



### Manufacturer/Supplier:

Concord (also spelled Conchord, with an H) is a renowned, very innovative guitar maker from Calcutta. Under the direction of its founder Bhabasindhu Biswas, Concord has developed modified guitars, which meet the particular requirements of Indian raga music. The Concord sarojveena in our assortment was developed especially for India Prime Icon Award winner J Sarkar. Ideas of virtuoso Debashish Bhattacharya have led to three novel slide guitars called Chaturangui, Gandharvi and Anandi. When Bhabasindhu Biswas passed away in 2020, his younger daughter Ria Biswas took over the workshop and has been working tirelessly ever since to continue the Conchord brand in its famed high quality.

### References:

1. Ross, S.D., Pharis, R.P. and Binder, W.D. 1983 *Growth regulators and conifers: their physiology and potential uses in forestry. Plant growth regulating chemicals* 14(2): 35–78
2. Searle, W. and Ward, C. (1990) *The Prediction of Psychological and Social-cultural Adjustment during Cross-cultural Transitions. International Journal of Intercultural Relations* 14(1): 449-464
3. Singh, T.C.N. and S, Ponniah. (1955) *On the Response of Structure of the Leaves of Balsam and Mimosa to the Muscial Sounds of Violin. Indian Sci. Cong* 42(3): 252-254.
4. Weinberger, P. and Measures, M. (1968) *The Effect of Two Audible Sound Frequencies on the Germination and Growth of a Spring and Winter Wheat. Canad. J. Botany* 46(3): 1151-1158.
5. Javier, Jaimovich., Niall, Coghlan., and Benjamin Knapp, R. (2012) *Emotion in Motion: A Study of Music and Affective Response. 9<sup>th</sup> International Symposium on Computer Music Modeling and Retrieval* 28(4): 19-22.
5. Kristeva, R., Chakarov, V. and Spreer, J. (2003) *Activation of cortical areas in music execution and imagining: a high-resolution EEG study. NeuroImage* 20(3): 1872 – 1883.
6. Lonsdale, A. J. and North, A. C. (2011) *why do we listen to music? A uses and gratifications analysis. British journal of psychology London England* 102(1): 108-134.
8. Measures, M. and Weinberger, P. (1969) *The Effect of Four Audible Sound Frequencies on the Growth of Marquis Spring Wheat. Canad. J. Botany* 48(2): 659-662.