

A Practical Guide to Writing

for the

Steel Drums (pans)

By

Joseph Peck

The history of the steel drum instrument went undocumented for much of the 20th century and has resulted in conflicting stories and viewpoints as to the invention and development of what is otherwise known as the “pan”. However, there are several undisputed facts. First, that the instrument was invented on the island of Trinidad between the years of 1939 and 1946 and secondly, the two originators are Winston “Spree” Simon and Dr. Ellie Mannette, the latter being the source of much of my research and also one of the builders and tuners of my pan instruments. Through my 20+ year relationship with Dr. Mannette and his apprentices I have been extremely fortunate to have gathered a vast amount of data first hand and observe the building and tuning process of the only acoustical musical instrument to be invented during the 20th century. I hope this handout provides you with a foundation to this beautiful art form and piques your interest to explore and incorporate the sounds of the steel drums into your own musical compositions.

Musically yours,

Joseph Peck

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Calinda, Tamboo-Bamboo, and Kaiso

The three musical art forms that preceded the steel drum and helped shape the style of music known as Calypso are Calinda, Kaiso, and Tamboo-Bamboo.

Calinda, a stick-fighting dance accompanied by drumming, was developed as part of Camboule “burning of the cane”, a ritualistic activity among slaves during the 1800’s.

The word tamboo, derived from the French word tambour, meaning drum, and bamboo, a tall tropical grass with hollow joint stems, collectively form the instrument know as **tamboo-bamboo**. Cut bamboo stems of various lengths and widths are struck together or pounded on the ground producing rhythmic and tonal characteristics. Bamboo bands, utilizing makeshift percussion instruments such as gin bottles hit with spoons, brake drums, metal containers, and cut bamboo would parade down streets in Trinidad producing a highly rhythmic and distinctly tonal sound.

The four main bamboo voices are:

- Cutters – soprano voice
- Chandlers – alto voice
- Fullers (foulé) – tenor voice
- Boom – bass voice

Kaiso – A satiric song tradition dating back to African societies. Also known as a folkloric singing art form in which one singer duels another in an improvised manner. Eventually the word Calypso replaced the term kaiso, however kaiso of yesterday and calypso of today are both closely associated with the pre-Lenten celebration known as Carnival.

Development of the Modern Steel Drum

The original steel bands were not comprised of pitched instruments but rather small biscuit tins, paint cans, bottles with spoons, empty gas tanks, virtually anything that was metal and struck or struck with metal. The beginning of pitched instruments began in or around 1939 in Port of Spain, Trinidad when a small biscuit tin was creased on the top and two distinctly different pitches sounded when the can was struck. This invention and development of tuning small biscuit tins, as well as paint cans is credited to Winston “Spree” Simon. Dr. Ellie Mannette was the leading person who took this concept and developed it further. Dr. Mannette has been officially recognized as the Father of the Modern Steel Drum.

The United States Navy during WWII opened a navel base on the oil rich land of Trinidad. By wars end the beach area of the navel base was used to store the abundance of empty oil barrels. Ellie as a young boy would swim out into the ocean at night, around a military fence that stretched into the water and come up on the navel base shore. He would then proceed to sneak an empty barrel into the water without being seen by the military patrol and swim back with the barrel. The destination of these barrels after his risky adventure was his uncles’ machine shop where he would work on placing notes onto the top of the barrel. Eventually Ellie took one of his tuned drums and performed live on the radio. The island was overwhelmed and the mass appeal for the pan had begun.

Politically speaking, the aristocratic controllers were not fond of this newly emerging art form. They considered those who played and built steel drums to be troublemakers or hoodlums. Through Ellie's years in Trinidad the government destroyed more than 200 of his drums. Although he suffered for his vision and was constantly harassed by the police and looked down upon by the upper-class, he never faltered and continued to invent and reinvent the process for tuning and placing notes on oil barrels with one solid goal in mind – to recreate the symphony orchestra on steel drums. “This vision led to the development of ten instruments which could accommodate the four basic musical voices (soprano, alto, tenor, and bass) and duplicate the textural diversity found in the conventional orchestra. “ (Mannette Steel Drums)

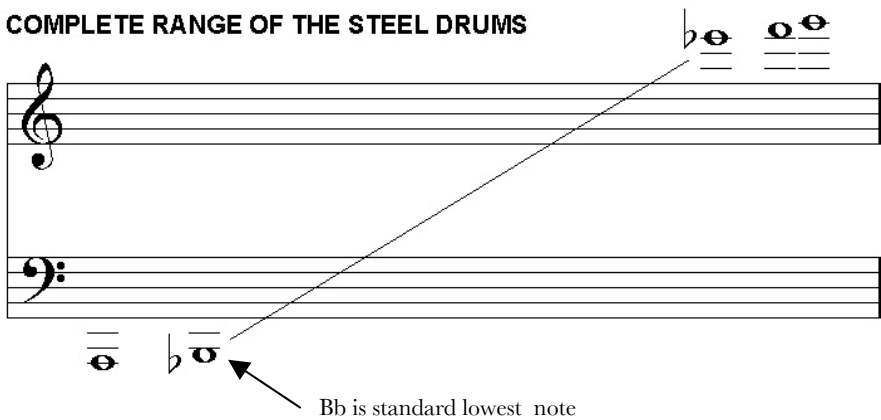
The Complete Family of Steel Drum Instruments and Their Ranges

Low (Invader) Lead
 Spiderweb Lead
 Double Tenor
 Double Second
 Quaduet
 Guitar
 Cello
 Quadraphonic
 Tenor Bass
 Bass

Less commonly used pan instruments

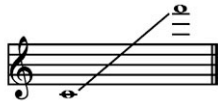
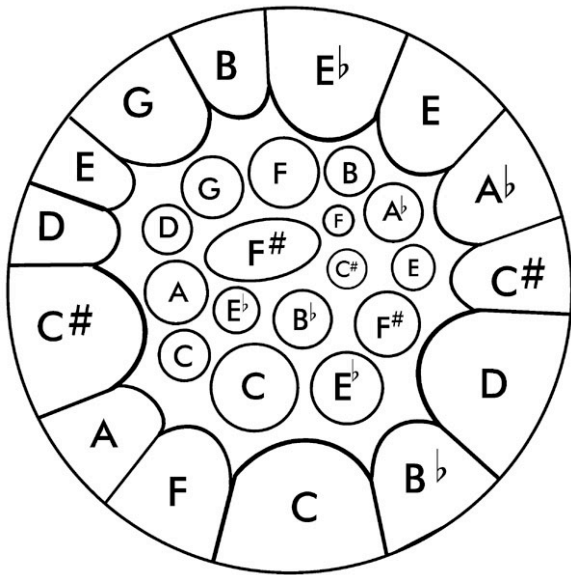
Triple Tenor – Coyle Layout
 Double Guitar – Smith Layout
 Double Guitar – Invader Layout
 Four Pan
 Nine Bass
 Twelve Bass

COMPLETE RANGE OF THE STEEL DRUMS



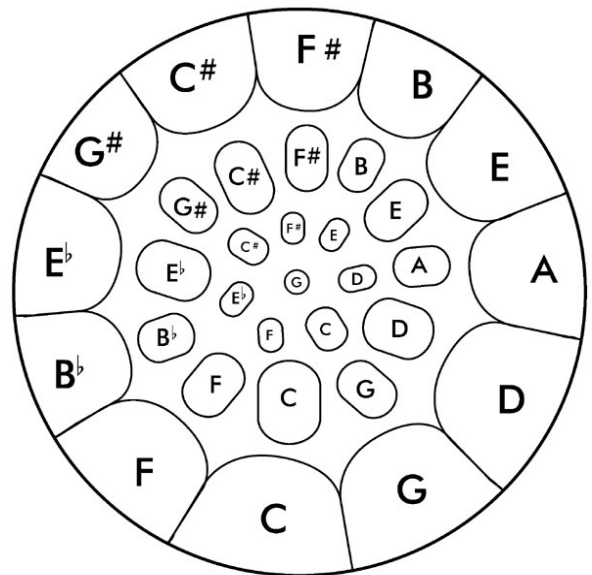
← Eb is general highest note. F & G are becoming more standard as the highest note depending on the builder/tuner.

LOW LEAD (invader)



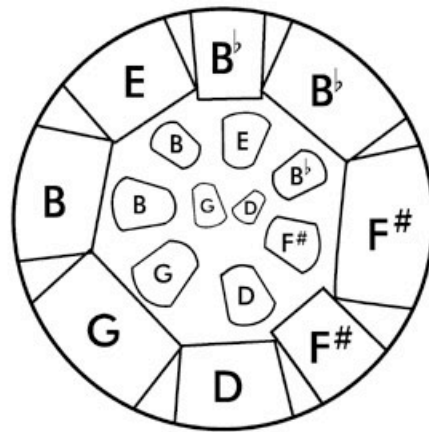
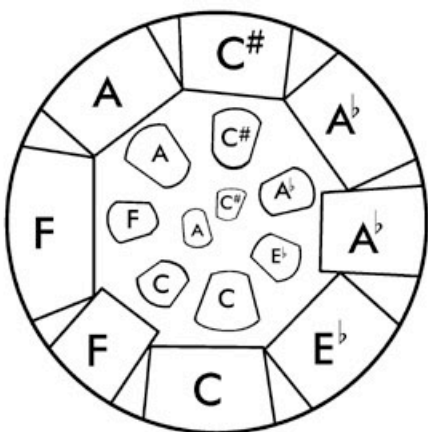
The scattered note pattern on this instrument is attributed to Ellie Mannette, the inventor of the Invader Lead. The first modern pan instrument to be designed. The range is C 4 up to F 6.

SPIDER WEB LEAD (circle of fifths)



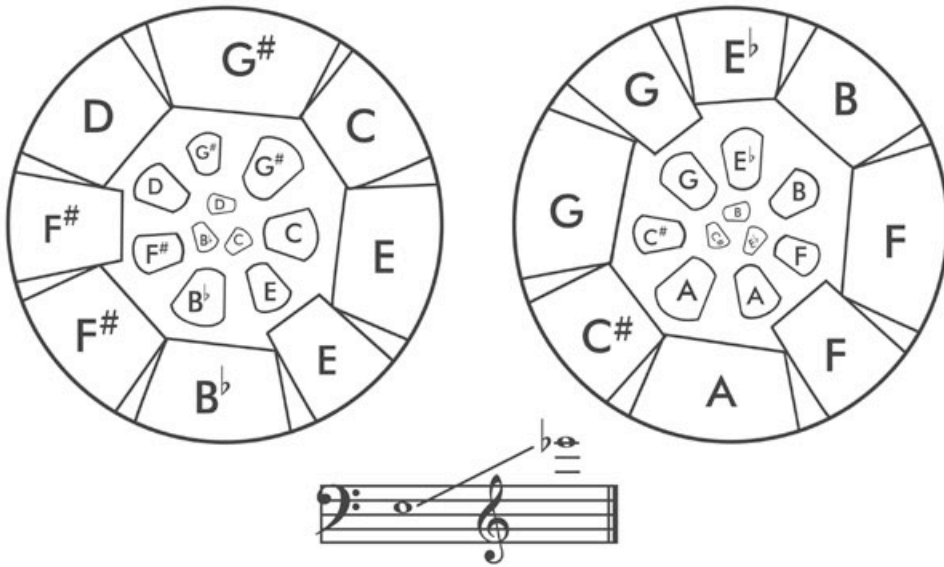
The Spiderweb Lead or circle of fifths is a melody instrument designed by Tony Williams and the most common pan instrument used for improvisation. Most Spiderweb Leads have a range from C 4 to Eb 6, however, Mannette leads go up to a G 6, and Coyle leads go to a F 6. It is common to also have Spiderweb leads that only go down to a D 4.

DOUBLE TENOR



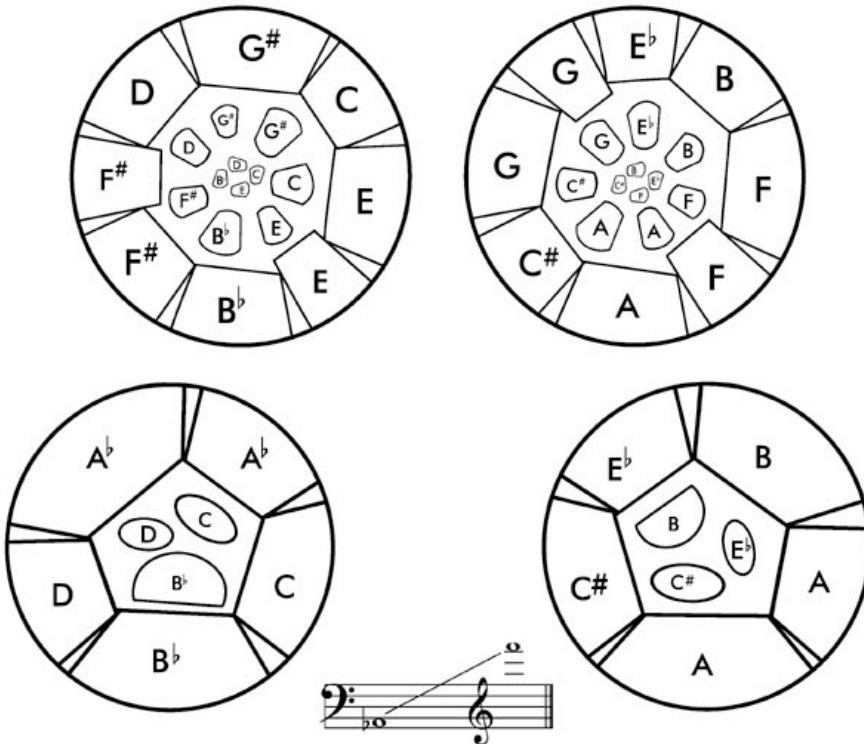
The Double Tenor was created by Bertie Marshall and is tuned with a brighter tone than the Double Second. This instrument is utilized to reinforce the melodic lines, usually an octave below the lead voice.

DOUBLE SECOND



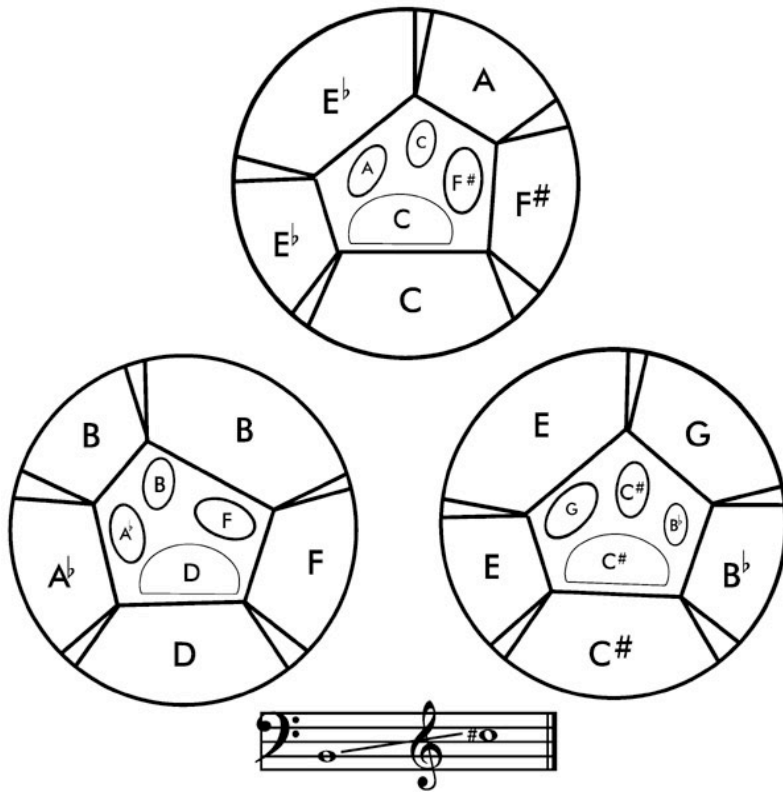
Designed by Ellie Mannette and based on the whole tone scale, the Double Second is one of the most versatile instruments in the steel drum family, especially with the added quaduet extensions. The double second is best known for its dark and warm tonal characteristics and is used to comp chords, carry the melody, or solo.

QUADUET



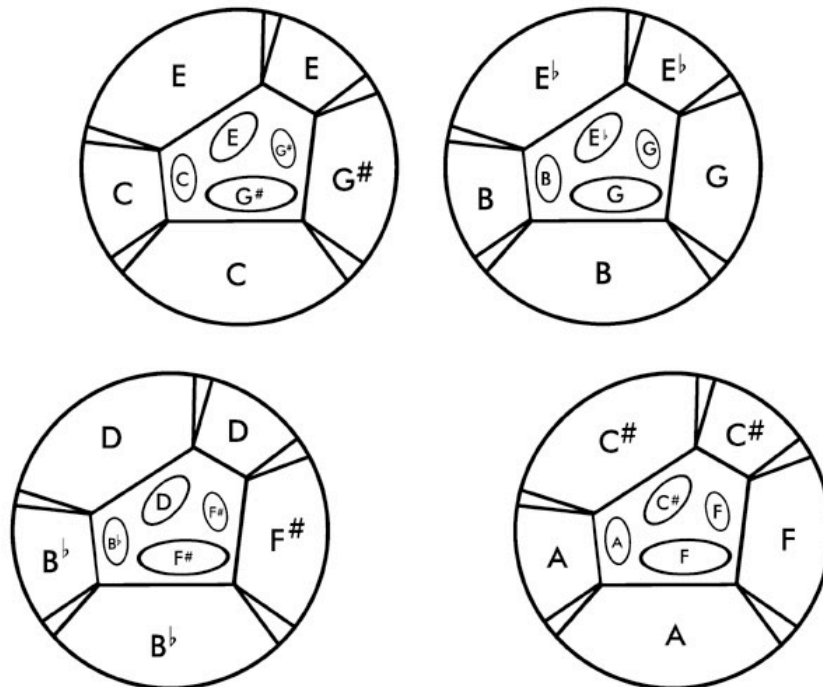
One of the most recent additions to the steel drum family, the Quaduet, utilizes the double second instrument with two extension drums. The extension drums like the double second follows a whole tone pattern. Quad extensions double Ab3 up to Eb4 of the double seconds, as well as providing an octave lower of the same notes.

GUITAR/CELLO

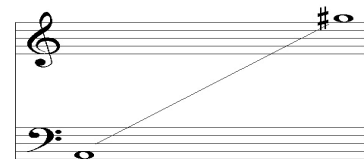


Both, Guitar and Cello, pan instruments were designed by Ellie Mannette. The image to the left shows the note arrangements for both of these instruments. However, it is not uncommon in Trinidad for the layout to be altered by other builders and tuners. Guitar and Cello instruments are based on the diminished-chord pattern. The Guitar is primarily used for “strumming” and has a darker and warmer tonal quality than the Cello. The Cello is primarily used to play arpeggios and is tuned brighter than the guitar. Due to the Cello’s long skirt it has more sustain and depth of tone than the guitar.

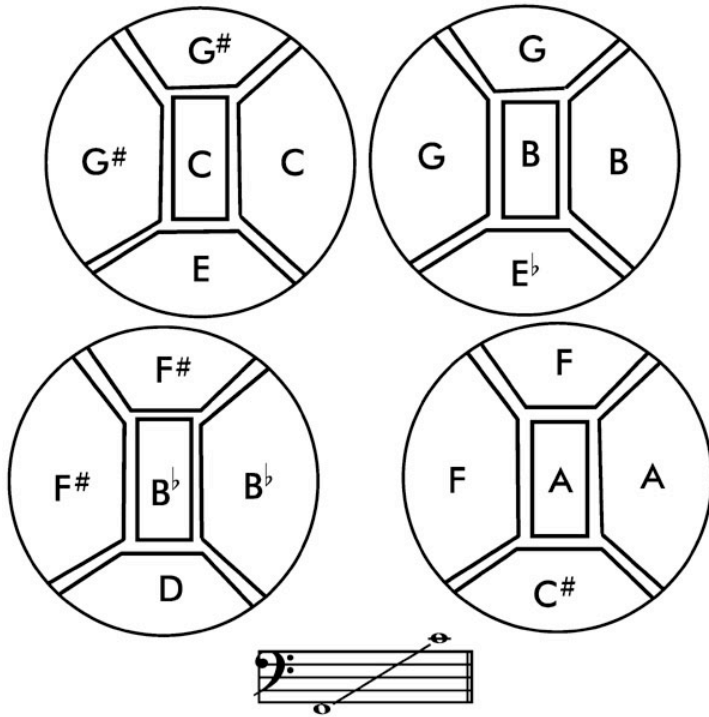
QUADRAPHONIC



Quadraphonic pans are based on the augmented-chord pattern and are played with the top two pans hanging in a vertical position. Used to play counter-melody lines, as well as arpeggios and “comping” lines.

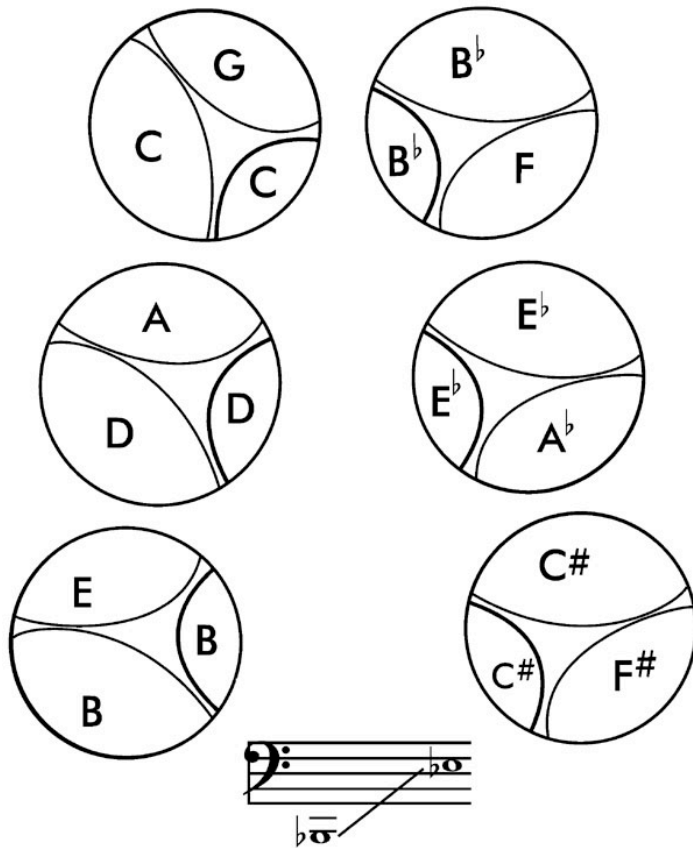


TENOR BASS



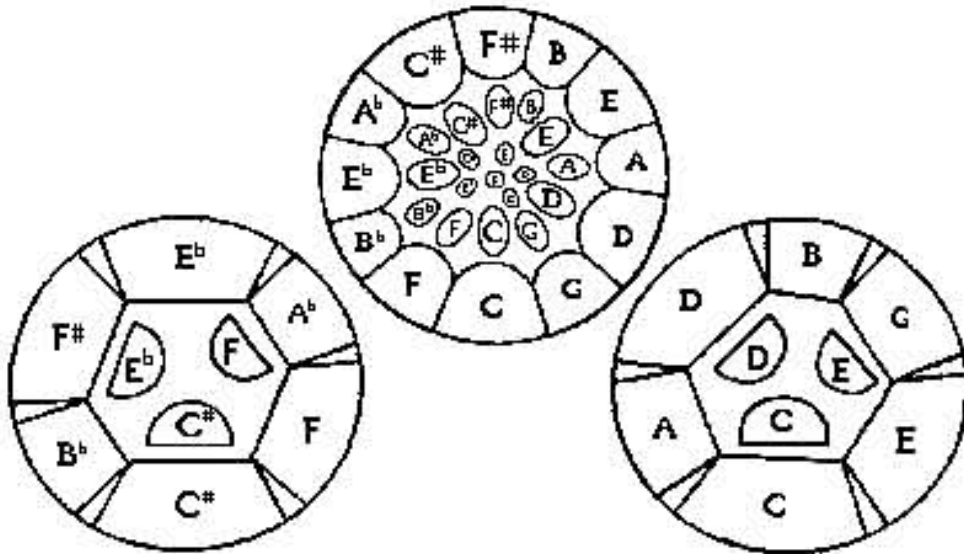
Tenor Bass is similar to the Quadraphonic instrument in that they both utilize the augmented-chord pattern. With its lowest pitch a fifth higher than the “six” bass, the tenor bass provides a stronger attack and less sustain than the “six” Bass.

BASS (six bass)

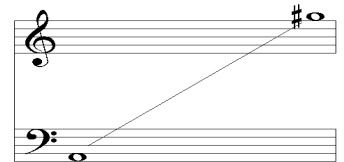


Basses produce the deepest, richest, and most haunting tones out of any instrument in the steel drum family. Tuned with three notes (tonic, fifth, octave) on each drum and an uncut skirt.

TRIPLE TENOR



Newest addition to the steel drum family, the Triple Tenor extends the tenor range down an octave to C3 by adding two extension drums.

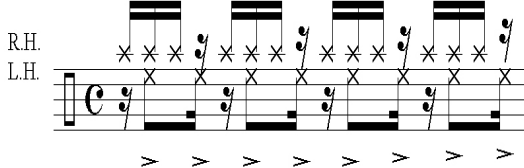


Triple Tenor Pan Diagram from Coyle Steel Drums – www.coyledrums.com

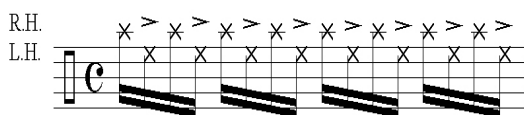
Rhythmic and Harmonic Characteristics

Panorama is the annual steel band competition that takes place at the Queens Park Savannah in Port of Spain, Trinidad on the last Saturday before Christian Lenten holiday begins. This festival of steel bands consists of up to 80 bands, each with a membership of no more than 120 musicians. The criteria used for judging the competitors are Arrangement 40%, General Performance 40%, Tone 10%, and Rhythm 10%. (percentage figures taken from 1993 competition) Below are common rhythmic and harmonic examples that are utilized in panorama style steel band arrangements, as well as calypso and soca styles of music.

Brake Drum Pattern #1



Brake Drum Pattern #2



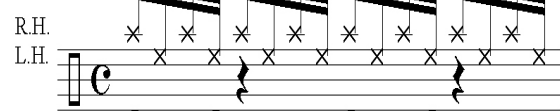
Brake Drum Pattern #3



Brake Drum Pattern #4



Drum Set Pattern #1



Drum Set Pattern #2



Drum Set Pattern #3

H.H.
Kick

Drum Set Pattern #4

H.H.
Snare
Kick

Drum Set Pattern #5

H.H.
Snare
Kick

Additional Engine Room Instruments

- Congas
- Bongo
- Timbales
- Shaker
- Scraper
- Cowbell
- Woodblock

Panorama Style Count-off's

Play a total of 3 times

Play a total of 3 times

Play a total of 3 times

Panorama Style Endings

Various Comping and Bass Patterns

G-7 C7 F D7

Db1. Sec. Comp ver. 1

Db1. Sec. Comp ver. 2

Guitar/Cello comp ver. 1

Bass ver. 1

Bass ver. 2

Bass ver. 3

Sample Chord Progression #1 – My Band by: Ray Holman

Intro 2/4 ||: C | F#dim | D min | G7 :|| | C | C | C | C A7 ||

(A section) ||: D7 | G7 | C | A7 | D7 | G7 | C | C7 |
| F | G7 | C/E | A7/C# | D min | G7 | C | C :||

(B section) ||: G7 | G7 | C | C | G7 | G7 | C | C |

||: D min | G7 | E min 7b5 | A7 | D min | G7 | C | C :|| loop last 8 bars
only on end.

Sample Chord Progression #2 – Rain-O-Rama by: Lord Kitchener

(Aldwyn Roberts)

In 2/4

(A section) || G | G | G G# dim | A min | A min | D7 | G |
| G | G | G7 | C | C# dim | G/D | D7 | G G7 ||

(B section) || C | C | G | G | D7 | D7 | G | G7 |
| C | C | B min7 | E7 | A7 | A7 | D7 | D7 ||

(C section) || : D7 | D7 | G | G | D7 | D7 | B7 | E7 |
| A min7 | C min7 F7 | G | E7 | A min 7 | D7 | G :||

General Notes to Consider When Writing/Arranging for Steel Drums

- Each player is capable of producing two notes or blends at a time. Although most pan players only play with two mallets, three or four mallet parts are possible for a single player, however, check the instrument diagrams to see how realistic a part may be based on the specific note configuration of that instrument.
- Spread the Chords when instrumentation allows. The warm and rich notes are found in the guitar and cello range, the “sweet” notes are most present in the double second’s mid-range.
- From pitch D3 and below avoid blends that consist of intervals smaller than a 4th unless a muddy effect is desired.
- The length of the barrel or skirt determines the amount of resonance an instrument will produce, in addition to the craftsmanship of the instrument. Since the steel drum produces the most overtones than any other instrument it may be desirable to dampen the “skirt”. By placing magnets on the inside of the “skirt”, the sound can be slightly dampened.
- The use of different size rubber tips on the mallets can effect the tonal quality and produce various effects, however, the instrument is delicate and bass pan mallets should never be used as an effect on double second and lead instruments and lead and second mallets should not be used on lower register instruments. The shafts can be made out of aluminum, wood, or hollowed bamboo.
- Striking or rolling on the drums skirt can create wide variety of special effects.
- It is best to keep the melody above E4 on the tenor drum.

Pan in the 21st Century

The sound of the steel drum into new genres of music, music not immediately associated with the Caribbean is still a relatively novel concept. Whether pop, rock, hip-hop or classical, the use of steel drums can add a distinguished color, in a most spectacular way, to virtually any musical application. The following musical excerpts are to demonstrate the steel drum instrument in just that way.

- | | | |
|----|--|---|
| 1. | Arioso (violin & quaduet) | <i>Johann Sebastian Bach</i> |
| 2. | Unknown Void | <i>Troy Olson</i> |
| 3. | World of Peace | <i>Rocco Guarino / arr. Joseph Peck</i> |
| 4. | Window Pain | <i>Rocco Guarino / arr. Joseph Peck</i> |
| 5. | Stonewall | <i>Rocco Guarino / arr. Joseph Peck</i> |
| 6. | Appreciation | <i>Joseph Peck</i> |
| 7. | Storm Sequence (for Exploration Place, Inc.) | <i>Joseph Peck</i> |
| 8. | #27 | <i>Joseph Peck</i> |
| 9. | Blood Shot | <i>Joseph Peck & Charles Franklin</i> |

Final Band Selections

- | | | |
|----|-------------------|-------------------------|
| 1. | Beatnik Fishstick | <i>Joseph Peck</i> |
| 2. | Cancao Por Rafa | <i>Rafael Campanile</i> |
| 3. | F | <i>Darren Dyke</i> |

Personnel

Joseph Peck – Steel Drums
Beau Jarvis – Keyboards
Tanya Bovaird – Violin
John Ballinger – Guitar, Steel Drums, Percussion
Colin McCoy - Bass
Eric Folk- Drums
Walter Garshon – Percussion

References

Rogozinski, Jan. *A Brief History of the Caribbean: from the Arawak and the Carib to the present*. New York: Penguin Books USA Inc., 1992 (ISBN 0-452-01134-5)

Goddard, Goerge “Sonny”. *Forty Years in the Steelbands: 1939 – 1979*. London: Karia Press, 1991 (ISBN 1-85465-034-3)

In addition to the published works listed a vast majority of information was obtained through personal conversations with the following individuals: Dr. Ellie Mannette, Ray Holman, Ken “Professor” Philmore, and Darren Dyke.

Joseph Peck

Joseph Peck is a musician, educator, and producer of music and educational programs featuring the steel drum instrument. He attended Wichita State University, where he earned his degree in Music Education. In 1996, he traveled to Trinidad, the birthplace of the steel drum, and performed with Potential Symphony (a 120-member steel drum band) for the Panorama National Steel Band Competition. Joseph went on to direct the Steel Pan Orchestra and teach World Music at Wichita State University. While in Wichita Joseph was an accredited artist with the Missouri Arts Council and Wichita Arts Partners.



Joseph has performed and/or recorded with artists such as Scott Weiland, Cyndi Lauper, the Survivor House Band (CBS – reality show), Ryan Gosling, and Didi Benami (American Idol) to name a few. In 2012 he released his first solo album titled “Free-Flow Steelpan Meditations, Volume 1”, an album that explores the sonic possibilities of the steel drum. As a performing artist, he gives steel drum presentations for the City and County of Los Angeles Libraries, as well as performing live and in the studio for various Latin, reggae, rock, and world music projects. Peck is also a teaching artist faculty member with The Music Center and a program facilitator for Drumming For Your Life Institute. Joseph holds a valid State of California Music Education K-12 Credential and is a published contributor in “Teaching in the Diverse Classroom: Learner-Centered Activities that Work”.

Partial Discography (steel drums and/or percussion)

- Speak To Me! – Pandora’s Box (1994)
- Blue Earth – Trouble Creek (1997) published by Panhead Music (ASCAP)
- Afinké Machine – Afinké Machine (1999) published by Panhead Music (ASCAP)
- Candlelight Christmas – Douglas Express (1999)
- River of Life – Reach for the Sky (2000)
- Explorations of Sound – Soundtrack for Exploration Place Science Center (2000)
- How ‘Bout This - Afinké Machine (2002) published by Panhead Music (ASCAP)
- Conscious Revolution – Cipes and the People (2007)
- Happy in Galoshes – Scott Weiland (2008)
- Dead Man’s Bones – (2009)
- Blind Boris – (2009)
- Meet Me At The Pub – Tall Can Wednesday (2010)
- Babylon Saints – (Self-titled debut) (2010)
- Joseph Peck – Free-Flow Steelpan Meditations, Vol. 1 (2012)
- Babylon Saints - Chameleon (2013)
- Steel & Strings – Violin & Steel Pan Duo (2015 release date)

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