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## The Organological Evolution of Vallenato: Membranophones and Idiophones

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### Abstract

*This paper analyzes the organological evolution of two percussion instruments representative of vallenato: the caja and the guacharaca. By means of a qualitative methodology of a descriptive-analytical type, the morphological, acoustic and technical-interpretative transformations of these membranophones and idiophones are explored, as well as their progressive incorporation into musical reading and writing systems. The analysis also contemplates its pedagogical and cultural resignification in the field of contemporary artistic training. The systematization of these processes contributes to the consolidation of traditional musical knowledge from an academic perspective, in articulation with the principles of the Special Plan for the Safeguarding (PES) of vallenato, as Intangible Cultural Heritage of Humanity.*

**Keywords:** Organology, vallenato box, guacharaca, musical notation, music education, Intangible Cultural Heritage, Special Safeguarding Plan (PES).

### Introduction

Vallenato music, recognized by UNESCO as Intangible Cultural Heritage of Humanity in 2015, is an emblematic expression of the sociocultural identity of the Colombian Caribbean. Its sonorous, symbolic and narrative richness lies not only in the stories it tells, but also in the instruments that give it life. In this sense, the caja and the guacharaca play a leading role, since they not only mark the rhythm of the four traditional airs —paseo, merengue, son and puya—, but also embody historical processes of cultural resistance, community appropriation and technical adaptation. These percussion pieces, apparently simple, are revealed as sound artifacts loaded with meaning, whose permanence and transformation reflect the dynamism of Colombian folklore in the face of the onslaught of globalization and musical modernization.

Indeed, despite its popular roots and the empirical nature of its oral transmission, both the caja and the guacharaca have gone through an evolutionary process that can be understood as a profound organological transformation. This process has been mediated by several factors: on the one hand, the emergence of production and recording technologies that require greater acoustic precision; on the other, the growing interest of educational institutions in including

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these instruments within formal musical training programs. In addition to the above, there are aesthetic changes that respond to the demands of new audiences and contexts of musical circulation. These elements have had a direct impact on aspects such as the physical structure of the instruments, the design of new interpretative techniques and the development of specific musical notation mechanisms that allow their systematic teaching in academic environments.

Therefore, this research aims to analyze the evolution of the *caja* and the *guacharaca vallenata* from a perspective that integrates both ancestral knowledge from oral tradition and the contributions of contemporary musical research. This articulation allows us to show how these instruments have moved from the popular to the institutional, from the square to the classroom, configuring themselves as objects of study that enrich the field of musical pedagogy. In addition, this analysis contributes to the safeguarding of *vallenato* as a living tradition, not anchored to the past, but in constant resignification. Consequently, it is proposed that the academic recognition of these instruments not only strengthens their cultural legitimacy, but also promotes their educational and artistic projection in the context of the twenty-first century, opening new routes for research, teaching and musical creation.

## **LA GUACHARACA: Friction Idiophone**

### **Origin and Cultural Context**

The *guacharaca* is an idiophone instrument of fundamental friction in the *vallenato* of the Colombian Caribbean. It consists of a corrugated surface – made of cane, wood or metal – and a metal carving with a wooden handle to generate the sound. Its name comes from the bird *Ortalis ruficauda*, whose rough song inspired both its name and the interpretive technique (Ramos, 2019). Some records indicate that the oldest versions were made with *corozo* (*Bactris guineensis*) stems and could measure up to four meters, suggesting a ritual use (Gómez, 2021). Initially, they were scraped with bones, but over time the metal carving was introduced to improve their precision and adaptability (Ministry of Culture, 2015).

Although traditionally considered to be of indigenous origin, this idea has been discussed by researchers such as Guerra Curvelo (2020), who argues that this classification responds to a widespread but not always documented symbolic canon. Along these lines, Egberto Bermúdez has proposed that its morphology is more similar to the African *charrasca* than to indigenous instruments. A key testimony of the nineteenth century is that of the traveler Henri Candelier, who describes a metal friction instrument in Riohacha, which evidences its early use in the region.

During the twentieth century, the *guacharaca* was consolidated as an essential element of the *vallenato* group, along with the *box* and the *accordion*. Performers such as Ángel Fontanilla contributed to its dissemination in pioneering groups, and its importance has been institutionalized in spaces such as the *Vallenato Legend Festival*. Today it is the object of study in academic and heritage contexts, representing a sound symbol in constant transformation (Ochoa Gautier, 2014).



Figure 1. Guacharaca Animal and Guacharaca Instrument.

Source: Authors, 2025.

### Physical Structure and Evolution

Currently, the guacharaca measures between 35 and 40 centimeters, dimensions that favor its ergonomics, portability and scenic adaptation (De la Rosa, 2012). In contemporary groups, it has occasionally been replaced by the Dominican güira, a more strident metal idiophone, especially in orchestral or modern fusion formats, where greater sound projection and brighter percussive textures are sought.

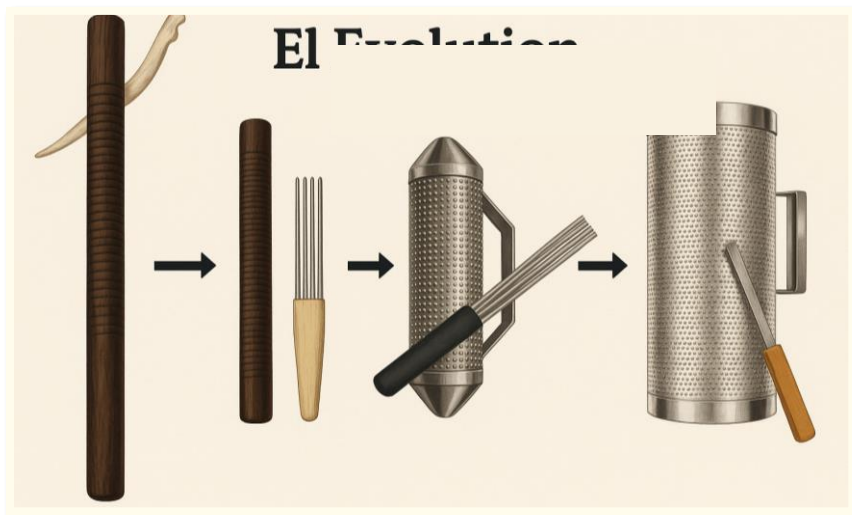


Figure 2. Physical Structure and Evolution.

*Source: Authors, 2025.*

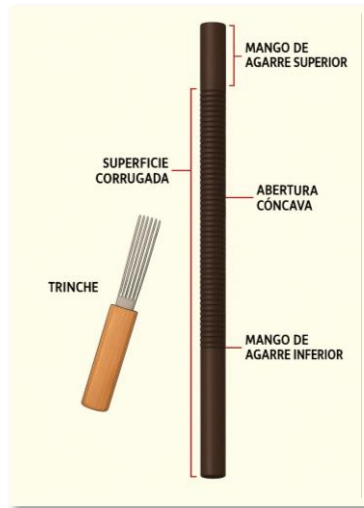


Figure 3. Physical Parts of Guacharaca.

*The guacharaca is composed of two grip handles, one upper and one lower, which allow the instrument to be held and supported during its performance. Its corrugated surface has shallow horizontal grooves, separated by about 5 millimeters, and usually includes three deeper vertical grooves that generate a high-pitched sound, as well as diagonals that add brightness to the timbre. At the back there is a concave opening that acts as a soundboard. The trinche, on the other hand, is an independent piece of between 20 and 25 cm, made with a wooden handle and inserted metal rods, whose function is to rub the surface and produce the characteristic rhythmic sound of the instrument.*

*Source: Model by Juan De La Rosa, 2012.*

### **Sound Mechanics and Interpretative Technique**

The technical evolution of the guacharaca has led to a significant transformation in the playing of the instrument, both in terms of body mechanics and sound refinement. Initially characterized by wide arm movements, the technique has shifted toward more precise use of the wrist, favoring agility and reducing muscle fatigue, influenced in part by the technique of the Dominican güireros. This transition has allowed for a greater variety of cuts, strums and rhythmic accents, enriching its expressiveness.

In a standing position, the performer rests the upper handle on the shoulder and holds the lower handle with the palm, while the carving is held with the other hand, ensuring that the metal rods move horizontally on the corrugated surface. In a seated position, the lower handle rests on the leg, maintaining the same principle of grip and execution. A third option combines elements of both positions, allowing greater versatility according to the comfort of the performer. In all cases, it is recommended to prioritize wrist movement to optimize technical performance and interpretive efficiency.






Figure 4. Ergonomic Interpretative Technique of Guacharaquero and Güirero.

Source: Authors, 2025.

### Music Reading and Writing

The interpretation of the guacharaca has historically been empirical, but recent developments such as the 'Manual for the learning of the guacharaca and the vallenata box' (De La Rosa, 2012) introduce specific notation and musical conventions for the four vallenato airs (paseo, son, merengue and puya), facilitating their formal teaching. To execute vallenato airs through this methodology, it is essential to understand a series of alternative symbols, called conventions. These allow movements and playing techniques to be clearly represented. These conventions are presented below.

SIGN	DENOMINATION	DESCRIPTION
	DESCENDING FRICCON	It indicates rubbing the carving from <b>downwards</b> , making a <b>short displacement</b> on the corrugated surface.
	FRICCON ASCENDANT	It indicates rubbing the carving <b>upwards</b> , making a <b>short displacement</b> on the corrugated surface.
	DOWNWARD FRICTION SUPPORTED	It indicates rubbing the carving <b>downwards</b> , making a <b>long displacement</b> on the corrugated surface.

	FRICCON ASCENDANT SUPPORTED	It indicates rubbing the carving <b>upwards</b> , making a <b>long displacement</b> on the corrugated surface.
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Figure 5. Music Conventions

Source: Design by Juan De La Rosa, 2012.



Figure 6. Musical Notation-Ride Air.

Fuente: Diseño por Juan De La Rosa, 2012.

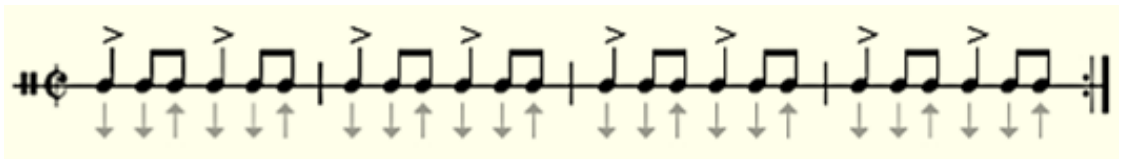


Figure 7. Musical Notation-Air of Son.

Source: Design by Juan De La Rosa, 2012.



Figure 8. Musical Notation-Merengue Air.

Source: Design by Juan De La Rosa, 2012.



Figure 9. Musical notation-Puya air.

Fuente: Diseño por Juan De La Rosa, 2012.

Figures 6 to 9 show the basic musical notation corresponding to the four traditional airs of vallenato: paseo, son, merengue and puya. Each one represents the fundamental rhythmic patterns of the guacharaca and the caja vallenata in 2/2 or 6/8 measures, with indications of the ascending and descending movements of the rasgado. It is important to clarify that these schemes illustrate only the basic rhythmic formulas, understanding that there are other variations and complex rhythmic patterns (De La Rosa, 2012).

## LA CAJA VALLENATA: Membranophone.

### Physical Structure and Materials

The vallenato box, classified as a membranophone according to the Sachs-Hornbostel system, is a single-membrane drum whose traditional production has been based on native materials such as ceiba or bellano wood and goat leather, selected for their acoustic qualities and resistance. This instrument, indispensable in the typical vallenato ensemble, reflects a cultural synthesis that integrates African and indigenous elements, as Andrea Maestre Celedón (2024) points out when addressing the ethnic influence in the formation of vallenato folklore. It also highlights the importance of these materials and their artisanal manufacture as part of the oral legacy transmitted between minstrels and empirical interpreters.



Figure 10. Physical Structure and Evolution.

Source: Authors, 2025.

Over time, the snare drum has evolved in response to the demands of contemporary scenarios and the technification of vallenato. Modifications in its size, the incorporation of more efficient tension systems and the use of modern tuning tools have allowed this instrument to adapt to amplified presentations, without losing its traditional character. According to Pérez de Arce and Gili (2013), the transformation of musical instruments is due to sociocultural and technological factors, which is evident in the case of the vallenato box.



Figure 11. Physical Parts of the Vallenata Box.

Source: Design by Juan De La Rosa, 2025

### Sound Mechanics and Technical Blows

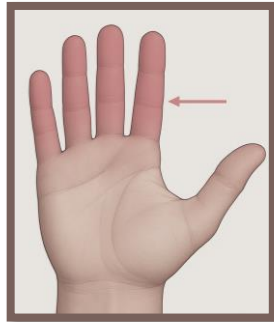
The technical evolution of the vallenato box has allowed a notable expansion of its rhythmic and expressive language, consolidating itself as a leading instrument within the vallenato ensemble. In the contemporary context, performers have incorporated advanced resources such as the 2-2 technique (alternating dominant and non-dominant hand), the development of independence between both hands and the application of "fans" as ornamental figures of rhythmic transition. These resources not only enrich the interpretation of traditional airs – paseo, merengue, son and puya – but also expand the sound palette through the deliberate inclusion of finger strokes, generating timbres that provide expressive nuances and dynamic textures.

In addition, there is a growing interest in exploring meter and rhythmic modulation, which has led to the introduction of changes in the squarture of bars and rhythmic amalgams, as well as the execution of passages in andantes and other tempi less frequent in the tradition. These innovations respond both to the influence of academic percussion schools and to intercultural dialogue with other genres, allowing the vallenato box to transcend its traditional role of accompaniment. In this new panorama, the instrumentalist not only interprets, but also proposes complex and creative rhythmic structures that resignify his role within vallenato, projecting it towards pedagogical, investigative and international projection scenarios.

For a correct execution of the vallenato box, it is essential to adopt a body posture that favors the comfort, technical efficiency and physical health of the performer. The cashier should sit stably, with his back straight and supported, keeping the checkout located between his legs at a comfortable height that allows him freedom of movement. The elbows should be slightly

separated from the body, avoiding elevated positions that generate fatigue or unnecessary tension. The hands, on the other hand, should be kept relaxed to facilitate the execution of the different strokes without rigidity. It is important not to lift your shoulders during the performance, as this action can generate muscle tensions that affect both performance and performance. bienestar del músico.

**GOLPE ABIERTO I**



**GOLPE SLAP**

**GOLPE ABIERTO II**



**GOLPE FONDO**



**GOLPE TAPADO**



Figure 12. Technical Blows To Interpret The Vallenato Box.

Source: Design by Juan De La Rosa, 2025.

### **Interpretive Technique and Training**

The snare drum has ceased to be a mere functional accompaniment instrument to become a vehicle of virtuosity and interpretative creativity. This change has been driven by the development of technical-pedagogical routines based on calisthenic principles, which strengthen motor independence, physical endurance and precision in execution (De La Rosa, 2015; Acosta & López, 2021). Progressive training using modular rhythmic patterns, fingering exercises by metric subdivision and the use of digital metronomes has raised the standards of training, aligning them with contemporary approaches in popular and academic percussion. Institutions such as the Popular University of Cesar and musical training programs in the Caribbean region have begun to include these techniques in their curriculum, favoring the professionalization of the performer from a comprehensive, corporal and stylistic perspective (Torres, 2019).

### **Music Literacy and Conventions**

One of the most significant milestones in the professionalization of the vallenato cashier has been the introduction of a rhythmic notation system adapted to the particularities of the

instrument. Based on the methodology created by Juan De La Rosa (2012), a neutral key writing has been proposed, in which each type of stroke—open, covered, slap, etc.—is represented by conventional symbols (x, o, square, etc.) on lines that indicate relative rather than tonal heights. This proposal has been welcomed as a key pedagogical tool both in music literacy processes and in curricular projects of the Special Safeguarding Plan, (UNESCO, 2015; Vega & Padilla, 2022).

NOMBRES	SIGNOS
GOLPE ABIERTO I	●
GOLPE ABIERTO II	○
GOLPE FONDO	⊕
GOLPE SLAP	×
GOLPE TAPADO	⊗

Figure 13. Musical Conventions.

Source: Design by Juan De La Rosa, 2012.



Figure 14. Musical Notation-Walk Air.

Fuente: Diseño por Juan De La Rosa, 2012.



Figure 15. Musical Notation-Air of Son.

Source: Design by Juan De La Rosa, 2012.

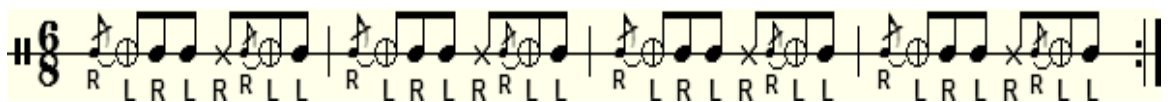


Figure 16. Musical Notation-Merengue Air.

Source: Design by Juan De La Rosa, 2012.



Source: Design by Juan De La Rosa, 2012.

Figures 13 to 16 present the musical notation of the four traditional airs of vallenato —paseo, son, merengue and puya— applied to the execution of the vallenato box. They indicate the specific beats with their respective fingerings (right and left hand), represented by the alternation R (right) and I (left), which allows the basic technical sequence of each rhythm to be visualized. These patterns constitute the essential rhythmic formulas used in traditional performance, but they do not encompass all the expressive possibilities of the instrument. In the *Manual of Typical Percussion*, various variations and interpretative resources are developed that significantly enrich each air within the musical context of vallenato.

## Discussion

The organological evolution of the caja and the guacharaca is not limited to material or technical transformations, but represents a broader process of cultural resignification in contexts of increasing musical globalization. These instruments, deeply rooted in the traditions of the Colombian Caribbean, have ceased to be perceived exclusively as empirical or folkloric resources, to be reinterpreted as valid means of academic and artistic expression. Such resignification has been possible thanks to the transition of oral learning towards processes of formalization, systematization and technical documentation, which have allowed its insertion in formal educational contexts.

In relation to the above, the emergence of teaching methodologies, the development of specific notational languages and the development of didactic materials based on contemporary pedagogical principles, have led to a new stage in the trajectory of these instruments. Far from remaining marginal elements in music theory, the caja and the guacharaca are beginning to occupy a legitimate place within musical training programs, hotbeds of artistic research and projects for the safeguarding of intangible heritage. This opening has generated an enriching dialogue between tradition and academia, in which sound memory, technical innovation and intercultural projection converge.

## Conclusions

The technical and pedagogical systematization of the caja and the guacharaca constitutes a substantial advance in the consolidation of a Colombian musical pedagogy with its own identity. When approached from organology, these instruments acquire a scientific and educational value that transcends the anecdotal or exclusively traditional. The development of reading and writing methods, the coding of beats and interpretative techniques, as well as their documentation in manuals and digital resources, have strengthened their intergenerational transmission and their permanence within the country's living heritage.

Consequently, these processes not only reinforce the technical-musical component of vallenato, but also project new routes for academic research, educational innovation and the international visibility of Colombian folklore. Articulation with policies such as the Special Safeguarding Plan (PES) makes it possible to link instrumental practice with broader cultural objectives, such as the preservation of sound diversity and the strengthening of the sense of belonging in communities. Thus, the caja and the guacharaca cease to be only instruments of the past to become active agents of the present and the musical future of Colombia.

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