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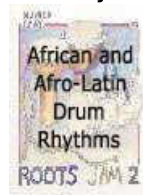


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Hand Drum Notations System sponsored by



HAND DRUM NOTATION SYSTEMS

[following text is in Courier New which makes for better transcription]

This page updated 10/06/02

Notation is, at best, a crude map of a rhythm. It is valuable to describe relationships and get you on the road to Heaven. But Heaven is to be experienced, it's not ON THE MAP!Barbara Bird

PREFACE

Notation, as a basic concept, is merely an attempt to represent the relationships between the sounds that form a rhythm, usually in some graphic format. Yet, while it might be hard to believe, notation is also a very controversial topic. Many drummers, especially those who have studied intensely with African teachers, have serious misgivings about its merits in general. Some dismiss notation as yet another attempt by Westerners to cram African (and Afro-Cuban) music into a stiff framework that has nothing to do with the music, while others find limited value in notation as a means of remembering the sequence of sounds and the relationship of the various parts of drum rhythms.

While it is true that notation systems are often misunderstood and applied in the mistaken idea that "The map IS the territory," they do have value in the recording and transmission of the basic nature of a rhythm. This is especially true for the new student. If the concept of notation is new to you, or you are reading this in an attempt to understand it better, do not mistake the dots, letters and numbers on the pages for the MUSIC. The music lies in the heart of the rhythm and everyone would agree that the best way to learn is from a teacher and the best way to understand a rhythm is to hear and play it. If you are already a student or have played for a while, you know that each teacher has his or her own approach. Some will offer notations of the rhythms they teach in the beginning, some will never offer them at all. If you are considering becoming a student be aware that your teacher may not even approve of the idea and refuse to discuss it in any meaningful way, preferring instead to concentrate on teaching you to feel the rhythm, not read it from a piece of paper.

Nevertheless there are several systems of notation in use for hand drum rhythms. The following is an introduction to the four most common methods. Keep in mind that you will likely see these four methods used in a mix-and-match manner in real life. This information is offered in an attempt to help others learn to use them in appropriate ways, especially when trying to remember patterns from class or practice sessions. You'll see, as you read through each method, that none of them are 'perfect' and yet all of them have value in a particular setting.

Larry Aynesmith of **White Cliffs Media** has been kind enough to author the Introduction and the section on Modified Western Notation.

HappyShel would be pleased to be notified via **email** of errors or receive your comments. Also see **Volume 4a** on "**Handing.**"

NPR segment about time signatures

This was on NPR's All Things Considered and describes one theory of rhythmacultures, and the interplay between 2 time and 3 time..

<http://www.npr.org/ramfiles/atc/20020604.atc.07.ram>

INTRODUCTION

by Larry Aynesmith - White Cliffs Media

In the study of African cultures one quickly learns that acknowledging and honoring one's ancestors is of prime importance. In discussing notational systems applied to hand drumming, including the use of western notation, we should perhaps follow the same guidelines.

Systems for notating music sprang forth in different parts of the world along similar time lines. In the early centuries A.D., independent notational systems appeared in Europe, China and India (perhaps earlier in India). Later, from roughly the 7th to 15th centuries, notational systems appeared in Japan, Korea, Bali, and other regions. Since most African musics have been orally transmitted, little has been discovered of notational systems for music in Africa.

Western musical notation has generally followed an independent line of development, although there may have been some Arabic and Middle Eastern influence insofar as the same influences affected written language. Some fragments of musical notation are found from early Greece, but little is known of early Greek music.

Western notation began around 600-800 A.D., with the development of the pneumatic system of notating Roman Catholic plainchant. It is thought that neumes may have been modeled after the practice of chirogony, where cantors used hand signals to indicate musical patterns to a choir. Around the 13th century a system of mensuration, or measuring of notes, began to represent rhythmic qualities of music. After many centuries, with contributions from many individuals from many countries, in both sacred and secular contexts, western musical notation became codified in its modern form. This happened around the 1850s primarily in Germany, France and England as notation was adapted to demands of the Classical and Romantic repertoires.

Other forms of western notation include solemnization (the application of vocal syllables to represent sound), tablature (the graphic representation of finger positions on instruments), and box notation. Certainly no one in the 1990s should claim invention of box notation. It was developed by music researchers in the 1950s and 1960s at UCLA. It was called TUBS, or Time Unit Box System, and was an attempt to develop a culturally neutral system of notation. Other early researchers such as George List claimed that a researcher steeped in a certain tradition can make notational judgments with western notation that are as good or better than any arbitrary or mechanical system of notation.

The chief advantage of using western notation in discussions of African music lies in the sophisticated tool set western notation offers for the representation of rhythmic relationships. The chief disadvantages of western notation for African music are the imposition of an implied set of assumptions about meter and note separation (bar lines) onto African music, and the cultural dissonance involved in applying a notational tool normally associated with orchestra musicians in tuxedos to African musicians and dancers in costume.

Box notation is excellent for representing beginning rhythms, but is totally inferior and inadequate for representing finer points of rhythm and musical phrasing. Therefore, I have always encouraged the fine authors with whom I have worked to use modified systems of western notation in presenting African music.

Since it has developed over the centuries to become a sophisticated tool, it would be foolish to discount western notation simply because it is western. It would also be disrespectful to African music not to use the best tools available. Western notation is simply a good tool that can profitably be used in certain analytical or descriptive contexts. Even in the West, no one has ever thought that notation is the be-all and end-all of musical experience.

NOTATION SYSTEMS

● **Modified Western Notation (Staff Method)**

● **The Gun Go Do Pa Ta Method**

● **The Box Notation Method**

● **The Morris (Djembe-I) Method**

● **Summary of Notation Examples**

All of the following methods have some commonly shared components. Each uses graphic symbols, most distinguish which drum sound is correct for it's place in the rhythm and each attempts to structure the sequence of sounds in relationship to one another. The complete notation for any given rhythm is usually in several parts, for various drums playing in ensemble, and for bells, shekere or clave. Each uses a consistent method to note each drum's part and, when viewed globally, can be valuable in understanding the correct relationship of various parts of a rhythm. I have presented them as if they were four independent systems that never come in contact with one another. In reality, aspects of each system are often intermixed to suit personal tastes.

I have elected to use the same basic phrase in the discussion of each method to allow for easy comparison between the systems. For the novice you'll note that the phrase is composed of 16 beats, each of which is of equal duration, and is intended repeated as desired.

Modified Western Notation - The Staff Method
by Larry Aynesmith - White Cliffs Media

Anyone involved in music should take the time to learn the basics of western notation, if only because it is a lingua franca in the modern world much the same as the English language (if you don't like it, blame history, don't blame me!). For the purposes of our discussion here, I will offer a brief primer:

Consider four even taps of the foot:

1 2 3 4

Represented as quarter notes:



Each note or tap may be divided by two, representing the "downbeat" and the "upbeat":

1 + 2 + 3 + 4 +

Represented as single eighth notes:



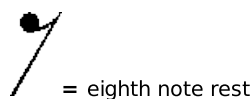
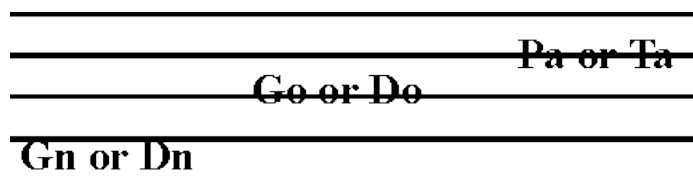
Represented as tied eighth notes:



We can place these four beats (or subdivisions of beats) on a staff of five lines and four spaces. Normally, each line or space represents a certain pitch. Since in this case drum tones have related but inexact pitches, we will simply assign types of drum tones to different spaces or lines. The bass (Gn or Dn) will be in the first space. The open tones (Go or Do) will be on the third line. The slaps (Pa or Ta) will be on the fourth line. Right or left hand strokes are indicated by an "R" or "L" beneath notes. In modifying western notation like this, we take advantage of the tools available for rhythmic representation (quarter notes, eighth notes, etc.) and modify the rest of it just like we would in box notation!

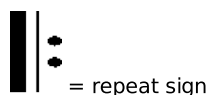
If we wanted, we could leave out all concepts of meter and present the notes in a simple straight time line. However--and this is a matter of judgment--the example chosen seems to fit in a basic 4/4 meter. So, we will group "measures" of four beats (quarter notes) each, divided by "bar lines." This is the meaning of 4/4 meter: Groups of beats are separated into groups of four, with each quarter note receiving one beat per measure. There is some debate as to whether concepts of western meter should be used in analysis of African musics. Writers such as David Locke have argued that in many contexts, African musicians psychologically group beat patterns in manners analogous to western metric practice. Although counting beats may not be in the foreground of African musical practice, most African musicians can easily analyze and present the music in these terms if they so desire. Therefore, metric concepts, carefully applied, can be useful tools for communication.

Guide to modified western notation as used in this example:



4

4 = meter



R = Right hand

L = Left hand

In strict keeping with the other examples, our modified western notation would be presented as follows:



However, since the open tones in measure one are probably not muffed, it may be more accurate to present them in their full duration, without rests, as follows:



Further, if this were a real example from an African teacher, it might be desirable to add a great deal more information such as accents, crescendos, slurs, etc.

By applying such analysis as we may need, we might then be in a better position to begin to understand the spiritual values of the music.

Larry Aynesmith, [White Cliffs Media](#) 02/16/97

References:

Mantle Hood. The Ethnomusicologist.

George List. "The Reliability of Transcription," Ethnomusicology 18(3)
1974, 353-378.

David Locke. Drum Gahu. White Cliffs Media (Tempe, AZ) 1987.

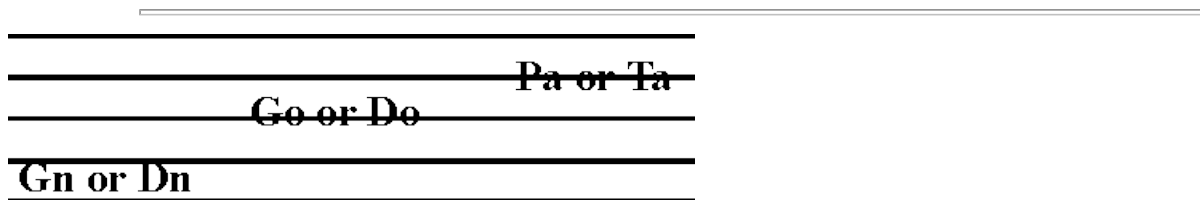
The New Groves Dictionary of Music and Musicians.

[Note: The master musician, composer, and choreographer C. K. Ladzekpo uses the system in his extensive presentation

[Foundation Course in African Dance and Drumming](#)]

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The Gun Go Do Pa Ta Method

This approach was developed and introduced by **[Babatunde Olatunji](#)**, in the early 1970's. In his own words, from the Foreword to his **[Drums of Passion Songbook](#)**, (copyright 1993) he asserts, " This method is the simplest, easiest, and fastest way to learn hand drumming. It was created twenty years ago at the Olatunji Center of African Culture in Harlem to teach anyone the art of hand drumming on the Conga, Djembe and Ashiko drums without inflicting unnecessary and unbearable pain on the hands and fingers." **[See also Volume 4a](#)**

It is fundamentally a vocal system using phonetics (Yoruba consonant sounds) to voice the rhythm. It's written form is secondary to it's greatest strength, the ability to hear the basic sound when reciting the pattern. The symbols that are used can be voiced and when a rhythm is noted in this manner it can be 'sung' aloud, though in a simple manner. An example of the echo of the drum sound by the voice of this method can be heard on the recording by the Cuban group **[Clave y Guaguanco](#)** - Songs & Dances (side 2: cut 2 - La Prueba De Ritmo) [Xenophile CSIF 4023].

This method has variants used by others but is commonly understood as this basic framework:

Gun (or Gn) = bass sound created with right hand
Dun (of Dn)= bass sound created with left hand
Go = open tone sound created with right hand
Do = open tone sound created with left hand
Pa = sharp slap sound created with right hand
Ta = sharp slap sound created with left hand
- =rest

While Baba himself does not always designate right and left hands when using the symbols, others use it in this way to not only record a rhythm, but offer a map as to which hands should be playing each sound (commonly called "sticking"), to place emphasis on certain beats, or merely allow the most fluid hand movement. When spoken, the phonetic symbols for the sounds approximate the actual sounds of the drum. The system has great integrity as a vocal learning system and a memory aid, and fits well with the African traditions of the djembe. It **doesn't** address Latin, middle-eastern, kpanlogo, or other styles very well as it has no sounds (or symbols) to indicate heel-toe, finger tip, muffled slaps, etc.

In the simplest use of this method, a rhythmic phrase might be written this way:

Gn Do Go Do Go Dn Pa Ta Pa Ta

While this line gives some clues as to the sound of the rhythm, the relationships between sounds is not really clear. Looking at it this way you might assume that all the sounds occur in unbroken sequence, with no pauses or rests. In this light it would appear that the second sound (the open tone Go) follows immediately after the initial bass Gn.

Gn - Do Go - Do Go - Dn - Pa Ta - Pa Ta -

Here is the same phrase with hyphens to indicate the rests between the sounds and give the intended feel of the rhythmic phrase. It's now more clear that the rhythm could be seen as made of two shorter phrases, each beginning with a bass; one followed by open tones, the other by slaps in a basic 'call and response' format. This is, of course, an over simplification, but useful to begin getting a feel of the rhythm.

1 e & a 2 e & a 3 e & a 4 e & a

Gn - Do Go - Do Go - Dn - Pa Ta - Pa Ta -

Here is the same phrase with one form of a basic 'count' written above it. In this example, the rests, are of equal duration and have the same 'time value' as each drum beat. The ears of most Westerners will focus on the 'feel' of this simple rhythm as beginning on the initial "1", with the balance of the pattern cycling around it. This is useful as a way of beginning to feel a rhythm, and find one's way in and out, but it should not be assumed to be true. Many African and Afro-Cuban rhythms are much more complex than this simple statement.

In his book, **Roots Jam**, Nowick Gray uses the Olatunji Gun Dun approach with the addition of other symbols to indicate high / low bell patterns, accented beats and other options not found in the basic method.

Some of the symbols he uses are:

D: Dun = bass beat with left hand

G: Gun = bass beat with right hand

d: do = rim beat with left hand (tip half of fingers)

g: go = rim beat with right hand (tip half of fingers)

T: Ta = slap beat with left hand

P: Pa = slap beat with right hand

X = low note on bass drum or two tone bell

x = any note on monotone percussion, or high note on two tone percussion

G - d g - d g - D - P T - P T -

His notation uses the same hyphens to indicate the rests in the phrase but he also includes a bar superstructure above the phrase to note the timing. In addition his method of noting bell patterns, in this case using a large X for the low tone (of a two tone bell pair) and a small x for the higher tone, is common for noting percussion patterns. It is crucial for bell or clave patterns to have the spaces noted and he, like others, uses hyphens to indicate the rests.

X - - x - - x - - x - x - - -

When the bar structure is added above the son clave (played on a two tone bell) it would be noted like this. Gray offers some additional insights to his use of the Gun Dun method (and a few hand drum lessons) on his **Rhythm of the Week** page.

More recently in his book **Roots Jam 2**, Gray uses the above "Gun Dun" lettering system in a box format:

1	.	*	.	2	.	*	.	3	.	*	.	4	.	*	.
G	-	d	g	-	d	g	-	D	-	P	T	-	P	T	-

Whereas the bar method is easier for handwritten or typed notation, the box method is easier to follow visually. More information on Box Notation follows below.

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The Box Notation Method

The most obvious element of this system is its use of a string of connected boxes to represent the basic time units of a rhythmic pattern. The current popular uses of this system would appear to be derived from the seminal work by Philip Harland. He developed a system of notation for African drum patterns in 1962 that he called the Time Unit Box System (TUBS) for use during his tenure as assistant head of the UCLA drum ensemble class in the 1960's and early 70's. His method was used by James Koetting in an article titled **Analysis and Notation of West African Drum Ensemble Music** in Vol 1 (3) of the publication of Institute of Ethnomusicology at UCLA (1970).

Koetting's treatise primarily uses the system to notate Ewe pieces utilizing sticks on the drum head using either simple dots or various symbols in the boxes.

The two most popular variations of this method, used as general instructional material, can be found in the books **The New Conga Joy** by Bill Matthews and **Conga Drumming: A Beginners Guide to Playing with Time** by Alan Dworsky and Betsy Sanbsy. Both use an approach to structuring the relationship between the sounds by dividing the rhythmic phrase into a line of connected boxes, each box representing one division of time. While both use the box method each approaches the presentation and symbols from different perspectives.

Bill Matthews uses a combination alphabetic characters and other symbols for some of the standard hand drum sounds:

B = Bass
O = Tone
S = Slap
H = Heel
T = Toe or touch
\$ = Muffled Slap
M = Muffled Tone
SS = Stick on Side of Drum
SO = Stick Tone (on drum head)
r = Rim Shot (with Index Finger)
. = rest

In addition he places an underline beneath the strokes that are to be played with your strong or dominant hand.

This system adds graphic symbols for drum sounds not able to be noted with the basic Gun Dun Method and does not attribute vocalizations to the symbols. With the introduction of the Heel / Tone symbols, Latin rhythms that use these strokes can be noted and the 'stick' symbols enable notation African rhythms that use stick / hand combinations.

The box framework helps visually structure the notation and acts as a reminder that all the time intervals of the rhythm should be accounted for; each box must contain a symbol, representing either a sound or a rest.

<u>B</u>	.	O	<u>O</u>	.	O	<u>O</u>	.	<u>B</u>	.	<u>\$</u>	\$.	<u>\$</u>	\$.
----------	---	---	----------	---	---	----------	---	----------	---	-----------	----	---	-----------	----	---

The same basic rhythm example would look like this when noted in Matthews version of the **Box Notation Method**.

Alan Dworsky and Betsy Sanbsy use the same basic box outline approach but have developed pure graphic (non alphabetic) symbols to represent the sounds from various hand positions. The three symbols necessary to present the basic phrase under their system are pictured below: a large asterisk to present the Bass, an open circle to represent the Open tone, and the triangle to represent the Slap.

In addition, the box notations in their book always contain the upper row of timing, and the lower row to direct the player which hand to use.

1	+	2	+	3	+	4	+	1	+	2	+	3	+	4	+
*		○	○		○	○		*		△	△		△	△	
R		L	R		L	R		L		R	L		R	L	

Here is the same rhythm presented using their framework and symbols.

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The Larry Morris' Djembe-L Method

Larry Morris', working with other members of the Djembe-L list and the rec.music.makers.percussion newsgroup, has developed a system that uses a combination of alphabetic characters and standard computer keyboard symbols that are easily organized and transmitted by computer. He uses this method in his **RhythmCatalog**. **It requires the use of a non proportional**

(monospaced) font (such as Courier) to display and properly align the notation. The symbols and the time structure remain aligned even when transmitted via email. It is intended to capture a wide variety of multiple percussion "grooves" in a basic form, mostly to facilitate early learning of rhythms in groups. It's readily adaptable to African, Latin, Cuban, Mideast, etc. styles (at a very basic level). This method, due to its ability to be transmitted by email, has become the standard of the djembe-l mailing list.

| first beat in the bar
 * other whole beats
 . half beats
 , quarter beats
 : repeat
 >> at end of bar = continue phrase next line
 B, b bass
 O, o tone
 S, s slap
 Sf, Of slap/tone flam
 h heel
 f finger
 . touch or spacer (rest)
 _ appears above notes that should be played with your strong hand

The system has undergone several revisions, and Larry continues to fine tune it with each new edition of The Rhythm Catalog. His own stated criteria for this system are:

- Capable of notating different musical cycles with main beats and sub-beats (and's + e's)
- Flexible to various hand-drum techniques: slaps, muffles, heel-toe, flanging, closed/open, accent/non-accent; but generally easy to see basic Bass/Tone/Slap patterns.
- Possible to show "sticking" i.e. which hands do what.
- Compact simple-ASCII notation as a "lowest common denominator" for the largest number of readers. Graphics can help understanding, but not everyone has the same computer display capabilities.

This system also uses both symbols to represent the sounds and a superstructure to indicate timing. Each eight beat 'bar' begins with a vertical line "|" and each of the other beats are indicated by either an asterisk "*" or a dot ".". The phrase we've been using as an example would be noted like this using Morris' method.

```
| . * . * . * . | . * . * . * .
B . 0 0 . 0 0 . B . S S . S S . :
```

Here are several more complex examples offered by Morris in a recent **Djembe-L** post. (Much of the following is quoted directly from that post)

EXAMPLE 1: This rhythm (in 12, or "compound time") shows some basic features. The "bar" is the first line and gives the timescale and beat subdivisions: 4 major beats (the first | and the *'s) each divided into 3 minor beats (.). The "High" voice consists of (S)laps, (O)pen-tones and one "slap-flam" (Sf). The underscores on the line above say which notes to hit with your strong hand.

The "High-mid" voice spans two measures before it repeats, as indicated by the ">>" continuation symbol. It also introduces a "heel" (h) or muffled bass sound. (h f) usually indicates Latin heel/finger technique.

```
12/8      |: . . * . . * . . * . . :|
High      S . 0 S . . S S . Sf 0 0
High-mid  0 0 . h S S 0 0 . h S S >>
           0 0 . Sf 0 0 0 0 . h S S
```

EXAMPLE 2: Here's a "swung" rhythm. It's basically in 4 (simple time), and can be played "straight", but the rhythmic feel calls for the dashed notes to be extended slightly in length, and the un-dashed notes shortened to compensate, giving more "bounce" to the rhythm. Also note the HIGH voice has a lead-in note; that is, the rhythm "starts" there even though its downbeat is at the beginning of the bar.

```
4/4      |: . * . * . * . | . * . * . * . :|
LOW      0- 0 S- S B- S S- S 0- 0 S- S B- S S- S
HIGH     S- . . S S- . 0- 0 S- . . S S- . 0- 0
                                   (lead-in) S
```


EXAMPLE 3: Here's a Latin multi-conga rhythm (one person playing 3 drums arranged in front of him/her). Notice there's only one line of underscores which applies to all 3 voices; this should be enough to determine how the hands move. The small "s" slaps are "less emphasized" notes, or closed slaps on the conga. Note that some other notation systems may use upper/lowercase to indicate which hand to use.

4/4 |: . * . * . * . | . * . * . * . :|

Quinto ¯ . 0 0 0 . ¯ . . ¯ 0 0 0 . ¯ . .

Conga 0 0 0 0 0 0 0 0

Tumba B s 0 0 B s 0 0

Larry recognizes limitations of the method and offers the following advice:

"Finally, some limitations. It doesn't work well for rhythms that incorporate "long sentences", or have many progressive changes (such as Bata rhythms). It's best for short, 16 or 12 count multi-voice "grooves". It's a visual reminder notation, NOT a vocal learning system like Gun Go Do or certain Indian vocal styles (associated with tabla/mrdungam). It doesn't show many subtleties, and it doesn't represent song/chant/dance that many consider integral to the rhythms. Use it for what it is, and not for what it's not! It's great for feeding new rhythms to a beginning/intermediate drum circle to get a basic feel; but if you want "the real stuff", find a teacher.

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SUMMARY OF NOTATION METHOD EXAMPLES

To better enable a comparison (and aid in translation) here is the example presented in all the various methods.



Modified Western Notation

Gn Do Go Do Go Dn Pa Ta Pa Ta

Basic Gun Dun Method

Gn - Do Go - Do Go - Dn - Pa Ta - Pa Ta -

Gun Dun Method with Rests Noted

1 e & a 2 e & a 3 e & a 4 e & a

Gn - Do Go - Do Go - Dn - Pa Ta - Pa Ta -

Gun Dun Method with Timing

G - d g - d g - D - P T - P T -

or:

1	.	*	.	2	.	*	.	3	.	*	.	4	.	*	.
G	-	d	g	-	d	g	-	D	-	P	T	-	P	T	-

Nowick Gray Approach to Gun Dun Method

<u>B</u>	.	<u>O</u>	<u>O</u>	.	<u>O</u>	<u>O</u>	.	<u>B</u>	.	<u>S</u>	S	.	<u>S</u>	S	.
----------	---	----------	----------	---	----------	----------	---	----------	---	----------	---	---	----------	---	---

Bill Matthews Approach to Box Notation

1	+	2	+	3	+	4	+	1	+	2	+	3	+	4	+
*		o	o		o	o		*		△	△		△	△	
R		L	R		L	R		L		R	L		R	L	

Dworsky and Sanby Approach to Box Notation

	.	*	.	*	.	*	.		.	*	.	*	.	*	.
<u>B</u>	.	0	<u>0</u>	.	0	<u>0</u>	.	B	.	<u>S</u>	S	.	<u>S</u>	S	:

Larry Morris 'Djembe-L' Method

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