# Guitar Deconstruction 17 Tones Raden Machjar

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***Abstract***

*Guitar 17 tone is believed Raden Machjar can include western music tone and karawitan tone. In general, the guitar that is used at this time is a guitar that only contains the tone of western music, Thus this paper will focus on the difference from the 12-tone guitar with 17-tone guitar with views of the fret scale size and basic techniques to play it. This research uses qualitative method with derrida deconstruction theory used to discuss Machjar raden thinking. The data obtained will be presented in the form of descriptive analysis.*

***Keywords:** Raden Machjar, Guitar 17 tone*

## *PRELIMINARY*

The salendro 17 tone barrel assembly is the highlight of Rd Machjar research. after he conducted several experiments to compile the theory of the barrel, both pelog and salendro. The assembly theory of salendro 10 tones and salendro 15 tones is the result of the experiment of Rd. Machjar before finding the salendro 17 tone barrel assembly. According to Rd. This 17-tone Machjar assemblies can accommodate all Sundanese tunings, even including Western music scales [1].

In 1969, Rd. Machjar, assisted by the local tourism office, made the Ki Pembayun gamelan to realize his 17-tone assembly. However, Ki Pembayun's gamelan is now lost somewhere. There is a possibility that this gamelan will be merged one by one by irresponsible parties. However, the traces of this 17-tone barrel can still be traced, because Rd. Machjar applied this 17-tone barrel to the guitar, which was later called the Ermak 17 guitar. The birth of the Ermak 17 guitar was one of Raden Machjar's proofs of the truth of the 17 tone salendro assembly theory. This guitar is physically no different from a regular guitar which has six strings. However, what gets interesting here is the scale fret[1] contained in the Ermak 17 guitar. The Ermak 17 guitar has 17 tones in one octave. By not changing the length of the neck of the guitar, this 17-tone Ermak guitar contains five additional tones that are not the same as a typical guitar. For music practitioners, especially guitar instruments, the application of the 17-tone assembly on Ermak's guitar will be a big question, because guitars generally only have 12 notes in 1 octave. Therefore, the author will discuss fundamentally about the fret system and basic techniques for playing the Ermak 17 guitar which is expected to be an answer to the

[1] Fret is a thin metal band attached to the neck of the guitar that defines the different notes on the guitar.

questions of music practitioners and musicians or ordinary people who want to know the Ermak 17 guitar. At this time people who can play the Ermak 17 guitar Very few, even those who know the existence of the guitar are still only circulated to certain people such as guitar practitioners and musicians researchers. This research is expected to be an introduction to the wider community about the 17 tone guitar. Indeed, to play the Ermak 17 guitar, a new adaptation is needed. However, this guitar is not unplayable.

The 17-tone guitar, which is one of Raden Machjar's inventions, has contradictory meanings and provides another view and another way of seeing and playing a guitar. Raden Machjar's big question about the differences between western music and Sundanese karawitan gave birth to a deconstruction of the guitar. Raden Machjar rejects the old structure that has been prevalent in the guitar and gave birth to a new structure.

## *RESULTS AND DISCUSSION*

### *A. Raden Machjar With Assembled 17 Tones*

At that time, Raden Machjar thought that in all the barrels in the world there was only one kind of assemblies, namely assemblies with 12 notes in one octave (chromatic tone). Raden Machjar studied this 12-barreled assembly on the guitar, including Sundanese songs played using a guitar instrument. After Raden Machjar understood the guitar, Raden Machjar finally played the positions of the pelog, salendro, and madenda barrels on the 12-tone guitar.

Raden Machjar's research on the four tunings with guitar media was shown to Mr. R. Mumuh, who is an expert on Sundanese tembang and gending in Sumedang. It was Mr. Mumuh's answer to Raden Machjar's research that opened Raden Machjar's mind and knowledge of Sundanese karawitan. Mr. Mumuh's answer is a reproach and refutation of the Sundanese song played using a guitar (12 tones). This is what made Raden Machjar recognize the difference between western music and Sundanese karawitan which made Raden Machjar continue to study the tunes in Sundanese musical.

For almost 46 years Raden Machjar has been researching Sundanese musical theory, especially about the barrel. The 17 tone barrel theory was the pinnacle of discovery after he conducted experiments on the pelog and salendro barrels. According to Raden Machjar, the madenda and degung barrels are produced from the salendro barrel assembly. The 17 tone barrel theory is a refinement of the experimental results of the 10 tone salendro barrel theory and the 15 tone salendro barrel theory tone[3]. Raden Machjar's experiments on tuning theory are heavily influenced by Western music theory. This is because the theoretical basis that was first understood by Raden Machjar was the theory of Western music. This can be seen from the description of the 10-tone salendro barrel theory and the 15-tone salendro barrel theory using the terms skewed or unfortunate in Western music theory called cruis and mole. The skewed and unfortunate theory in Raden Machjar's theory is basically the same as the term cruis and mole in Western music theory, namely raising and lowering a note that is half the magnitude. According to Raden Machjar, the 10-tone salendro barrel theory is not the same as the practice in the field. As a result, Raden Machjar re-measured the madenda and degung barrels to get something better. From the results of the study, the 15 tone salendro barrel was born. The results of this 15 tone salendro padantara are better than the 10 tone salendro padantara. This was acknowledged by Raden Machjar and the musical artists at the time. However, Raden Machjar was still not satisfied with the results of the 15 tone salendro barrel. According to

[3] *"Ringkesan Pangawikan Rinenggaswara"*

him, the resulting kempyung is still too big, which is 720sen. As well as by the artists of the salendro tune, these 15 notes are still felt a little discordant [2].

This 17 tone assembly is a correction of the 10 tone salendro barrel assembly and the 15 tone salendro barrel assembly. The 17-tone assembly was inspired when Raden Machjar watched the Madjasik fiddle playing the 9-tone madenda barrel. According to Raden Machjar, playing this fiddle has a very precise tone. So this rebab game is calculated by Raden Machjar using a monochord tool. After counting, Raden Machjar tried to cross and tilt the notes from the 9-tone madenda barrel and obtained 17 tones which included poor and slanted tones with intervals of each note 70 10/17 cents [3]. The mathematical calculation is as follows 1200 cents: 17 = 17 10/17 sen. The following is a table of frequencies and intervals assemblies 17 tones:

*Table 1*

Tabel frekuensi rakitan 17 nada

| NO | NADA | FREKUENSI | INTERVAL |
|---|---|---|---|
| 1 | Pangasih | 256 Hertz | 73 Sen |
| 2 | Gulu Malang | 265 Hertz | 70 Sen |
| 3 | Pangasih Mir | 278 Hertz | 70 Sen |
| 4 | Gulu | 289,5 Hertz | 70 Sen |
| 5 | Dada Mal | 301,5 Hertz | 71 Sen |
| 6 | Gulu Miring | 314 Hertz | 70 Sen |
| 7 | Dada | 327 Hertz | 72 Sen |
| 8 | Panangis | 341 Hertz | 70 Sen |
| 9 | Lima Mal | 355 Hertz | 72 Sen |
| 10 | Panangis Mir | 370 Herrz | 69 Sen |
| 11 | Lima | 385 Hertz | 70 Sen |
| 12 | Nem Malang | 401 Hertz | 72 Sen |
| 13 | Lima Miring | 418 Hertz | 69 Sen |
| 14 | Nem | 435 Hertz | 70 Sen |
| 15 | Barang Mal | 453 Hertz | 71 Sen |
| 16 | Nem Miring | 472 Hertz | 71 Sen |
| 17 | Barang | 491 Hertz | 69 Sen |
| 18 | Pangasih | 512 Hertz | 72 Sen |

According to Raden Machjar, the difference of 3 cents will not be felt by human hearing. Then the interval distance as the table above is rounded up to 70 cents. Theoretically, this 17-tone assembly can cover all the existing tunings in Sundanese even western music scales including inside it.

The 17-tone guitar was born through a long process until it finally materialized. Interest Rd. Machjar on guitar instruments and Rd's passion. Machjar playing Sundanese songs using a 12-tone guitar was deemed inappropriate by Rd. Machjar. This is what makes a 17-tone guitar possible. In this case Rd. Machjar performs a deconstruction of a 12-tone guitar to produce a 17-tone guitar. The meaning of deconstruction is taken from Jacques Derrida who discovered the theory. Deconstruction according to Derrida that there is no absolute, single, universal, and stable meaning, but meaning is always changing.

Deconstruction here can be interpreted as a reduction or decrease in the intensity of the form that has been arranged, as a form that has been standardized. Ratna (2005: 250-251) asserts that in contemporary theory, deconstruction is often interpreted as dismantling, rejecting, destroying in relation to the perfection of its original meaning. According to [4]there are three basic theoretical assumptions of deconstruction, namely: (1) Concerning the instability of language meaning. (2) there is no analytical method that has a special claim on the authority of textual interpretation. (3) interpretation is more of an unlimited activity and is more like a game than analysis. What can be interpreted by Derrida's theory of deconstruction is to look for new meanings from something that already has a standard, structure, even what is considered sacred can still be done.

The concept of deconstruction is an idea or other meaning from a pre-existing meaning. Lexically, deconstruction is defined as demolition ([5]. But the demolition is not something that ends with monism or even emptiness, but a new existence starting from the former or from something that already exists.Al-Jabiri asserts that the concept of deconstruction is overhauling the standard (and frozen) relational system in a certain structure and making it "not a structure" but as something that is fluid and fluid. This includes a change from something standard to something fluid and changing, an absolute change to something relative, something a-historical to something historical, and an absolute change to something temporal. In turn, what is sought later is to reveal the rational side in all the problems.

In this case Rd. Machjar proves that the guitar which is commonly used throughout the world does not apply in the country or in the Rd area. Machjar is. A 12-tone guitar is a guitar that already has a standard grip and certain techniques to play it. The 12-tone guitar is felt to be very absolute and stable for use by many audiences. Derrida's deconstruction as a theory in this study is used in conducting the following analysis: referring to Derrida's theory to analyze the new meaning of the 17-tone guitar which is the deconstruction of the 12-tone guitar. Deconstruction is another meaning of a pre-existing meaning, lexically deconstruction is defined as demolition. To be able to see a new meaning of the 17-tone guitar, an analysis of the difference between a 12-tone guitar and a 17-tone guitar will be carried out.

### B. A Brief Story Of The Guitar

Before discussing the Ermak 17 guitar in particular, it's a good idea to review a little about the history of the guitar. The guitar is a musical instrument that is played plucked. The guitar has a flat front and back body with a sound hole in the front and frets along the neck of the guitar. The guitar has six strings with their respective notes. String 1 = e, string 2 = b, string 3 = g, string 4 = d, string 5 = a, and string 6 = e(low). However, to get the results of a 6-string guitar as it is now commonly used, the guitar goes through a very long process of forming. The guitar is believed to have originated from a stringed instrument in ancient Greece called the kithara. However, the kithara is more shaped like a small harp.Pada abad ke-11, in Europe began to appear stringed instruments similar to the guitar. The design is believed to have been obtained from musical instruments in Asia, one of which is the gittern. The shape already resembles a modern guitar, even equipped with frets on the neck. The strings are made of lamb intestines. The number of strings is three or four, with two strings per lane[6]

For more than 2 centuries gittern developed into various similar forms such as quitarra, guiterre, guitarist, and guitar. In the 1300s, in mainland Europe developed two guitar designs with the name Latin guitar (derived from Spain) and guitar morisca (originating from the Middle East and Far East). In Arabia developed a stringed instrument called the lute, shaped like a guitar but with a pear-like body shape with more courses[7].

In parts of Europe the name gittern was changed to vihuela. But the renaming did not make gittern completely disappear. Records show that King Henry VIII of England was skilled at playing the vihuela. The Vihuela found its heyday only until the late 16th century when it was replaced by the baroque guitar. The shape is similar to a modern guitar, only it is smaller in size and only has four courses. This makes it difficult if the musician wants to play a more complex song. Therefore, the baroque guitar with five courses appeared in the 16th century. It was at this time that the glory of the guitar began[7].

Entering the 17th to 18th centuries, the popularity of the guitar seemed to stop. Very few composers pay attention to the guitar. Gradually, the guitar was only played by street artists. Nevertheless, the guitar is still growing. There is even something similar to a modern guitar that already has six courses, only the tuning system is completely different. Entering the 19th century, the guitar re-entered the gates of its glory. Many outstanding composers use guitar instruments in their works.

Entering the 20th century, guitar design in Europe is not uniform. Each guitarist can play a different guitar from other guitarists. The person who was most responsible and most influential to the design of the guitar as it is today was Antonio Torres Juardo (1817-1892). This guitar maker from Spain found a standard of guitar anatomy (dimensions, frame, length, strings, and so on) that was able to produce maximum sound, while being comfortable to play. Findings like Juardo were soon followed by other guitar makers with their own peculiarities. Therefore, extraordinary composers were born who continuously popularized the guitar. One of them is Francesco Tarrega (1852-1909), a Spanish-born guitarist. Tarrega is a pioneer of classical guitar playing into a science and an art of its own. Until now, guitarists and composers continue to emerge who continue to develop guitars, both in terms of playing techniques and new discoveries of the guitar itself. Currently the guitar is divided into four types, namely classical guitar, folk-acoustic guitar, acoustic-electric guitar, and r electric guitar.

The development of the guitar also had an impact on the development of music in Indonesia so that at that time many Indonesian traditional songs were accompanied by guitars. From 1916 to 1920, the students who attended Kweekschool received Western music lessons including guitar, at that time one of the students was Rd. Machjar. This illustrates that around 1900 guitars had become popular in Indonesia.

### C. A Brief Story of Gitar Ermak 17 nada

Starting from the introduction to Rd. Machjar, who then introduced musicology to Ki Anong “luthier” (a 17-tone guitar maker), sparked a discussion about the desire of Rd. Machjar to make a guitar that can play Sundanese songs. From these discussions began the process of cooperation in the creation of the guitar in the mid-1950s.

At that time, there was no frequency measuring instrument so Ki Anong experimented with making a measuring instrument in the form of a guitar neck with sliding frets. Based on these tools, various experiments were carried out by Ki Anong as a practitioner and Rd. Machjar himself determines the tuning. In a period of approximately 16 years, with various obstacles in the form of economic conditions and the busyness of Ki Anong as a pioneer and financier of the Genta guitar factory as well as the busyness of Rd. Machjar.

After going through a process with a period of approximately 16 years, in 1972 Raden Machjar assisted by Ki Anong Naini completed the Ermak 17 guitar which was the first generation of the guitar. At that time, the Ermak 17 guitar made by Ki Anong amounted to three guitars. Currently, the existence of two Ermak 17 guitars is still stored in West Java, but one guitar's whereabouts still need to be investigated to be sure. Here is a list of the first generation Ermak 17 guitar holders (made in 1972):

1. The first guitar is in the Raden Machjar Anggakoesoemadinata museum in Sumedang.

2. The second guitar is in the residence of Prof. Dr. Prajatna who is the son of Raden Machjar, Ciburial. Bandung.

3. The third guitar whose existence needs to be explored more deeply.

According to the author's interview with Ki Anong, the guitar was brought by a musicologist from the Czech Republic, because at that time the guitar was bought by him. However, from the description of the book written by Heri Herdini entitled "Raden Angga Koesoemadinata "His Thoughts and Creativity in the Sundanese Karawitan World" wrote that the Ermak 17 guitar was requested by Ayub Ismail from the Malaysian Ministry of Culture. This information was obtained from Ismail's letter, 19 March 1974, which was sent to Raden Machjar. The essence of the letter is Ismail's request to Raden Machjar that the Ermak 17 Guitar be sent to him as a lesson material that explains the position of the distance that is different from an ordinary guitar (Heri Herdini, 2007: 110).

According to Ki Anong, the first generation Ermak 17 guitar was made with poor wood. This was due to limited funds, and quality wood was still difficult to obtain at that time. Ermak's guitar stored at Museum Rd. Machjar and those stored in Mr. Prajatna's residence are no longer suitable for use. Therefore, the second generation Ermak 17 guitar was born in 2004 which uses better wood.

The following is a list of names that store the second generation Ermak 17 guitar:

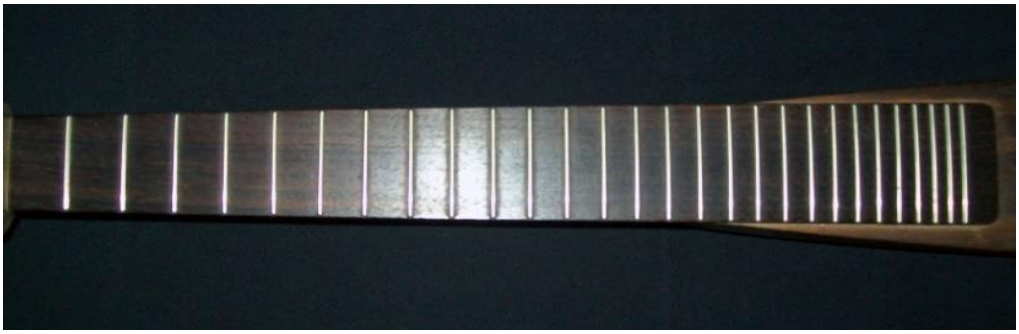
1. Prof. Dr. Prajatna who is the son of Raden Machjar and heir to Rd. Machjar, Bandung.

2. Mukti-Mukti, ballad artist and singer, Bandung.
3. Agus Rukmana, guitar teacher and gamelan guitar practitioner, Bandung.
4. Iwan Abdurrahman, environmental activist and ballad singer, Bandung.
5. Harry Pochang, Music Artist, Bandung.

Luckily I got permission to make the 6th 17 tone Ermak guitar in 2010 (at that time the author chose Ki Anong's residence for Professional Work Practice). At that time, the author followed the manufacturing process by Ki Anong. Actually, the conversation about making Ermak 17 guitar has been going on for about 3 years, but it was only possible and completed in 2010. Previously, there have been 5 Ermak 17 guitars that have been made by Ki Anong from 2004 until now. The 5 guitars are now in the possession of their respective owners for the purpose of research and development of Ermak's guitar research itself.

In Rd Machjar's biography until his death, he has not had time to write in detail about the 17-tone guitar, both in terms of playing techniques and the difference between it and the 12-tone guitar. The article on the 17 tone theory is more specific which is applied to Ki Pembayun's gamelan instruments. At this time the 17 tone guitar can only be played well by Agus Rukmana (one of the owners of the 17 tone guitar). Therefore, this research is mostly absorbed from Agus Rukmana's technique in playing the 17-tone guitar.

**C. The difference between a 17-tone guitar and a 12-tone guitar**



Pic.1 Guitar fretboard parts (Photo: private collection)

Gbr 2. Silent guitar yamaha gitar 12 nada (https://c.slashgear.com download 14 mei 2017)

Here are the differences between Ermak 17 guitar and diatonic guitar
The division of tones found on the Ermak 17 guitar:
- On the western musical scale in one octave there are 1200 cents

C D E F G A B C
200 200 100 200 200 200 100
200 + 200 + 100 + 200 + 200 + 200+100 = 1200

- The calculation on the guitar 17 levels is as follows::

1200 : 17 = 70 10/17 sen.

If the calculation as above was poured on the guitar, it will find a new count and a new formula. Because on the guitar there is a fret count that distinguishes one note from another. Therefore the calculation must be accurate and precise. For more details about the difference between the Ermak 17 guitar count and the 12 tone guitar, see the picture below:

On a 12-tone guitar:

| e | f | fis | g | gis | a | ais | b | c | cis | d | dis | e | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | = 1200 sen |

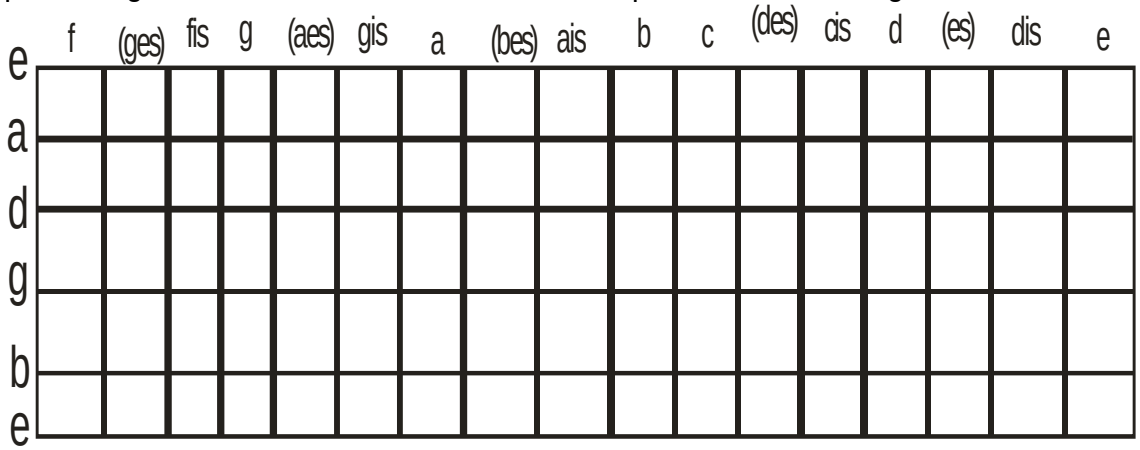
On guitar Ermak 17:

| e | f | ges | fis | g | aes | gis | a | bes | ais | b | c | des | cis | d | es | dis | e | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 72 | 70 | 72 | 69 | 70 | 72 | 69 | 70 | 71 | 69 | 72 | 73 | 70 | 70 | 70 | 71 | 70 | | = 1200 sen |

Drawings in order of scale on a string guitar 1 = e

For additional notes on the Ermak 17 guitar such as (ges, aes, bes, des, es) were named for consideration for research needs. Because until now there has been no naming of the insertion notes listed on the 17 tone guitar. The name is taken from the absorption of western music tones.

The most obvious difference between the Ermak 17 guitar and the 12 tone guitar is that it can be seen from the number of notes in an octave. On the Ermak 17 guitar there are 17 tones in one octave, while on the 12 tone guitar there are 12 tones in one octave. There are five insert notes on the Ermak 17 guitar. For more details, it can be seen on the shape of the guitar neck in one octave. Here's an explanation of the image:




Pic. 3 Ermak guitar in 1 octave

If seen from the picture, there is a tone that is not as usual. Inside the Ermak 17 guitar there are insert notes such as ges, aes, bes, des, es.

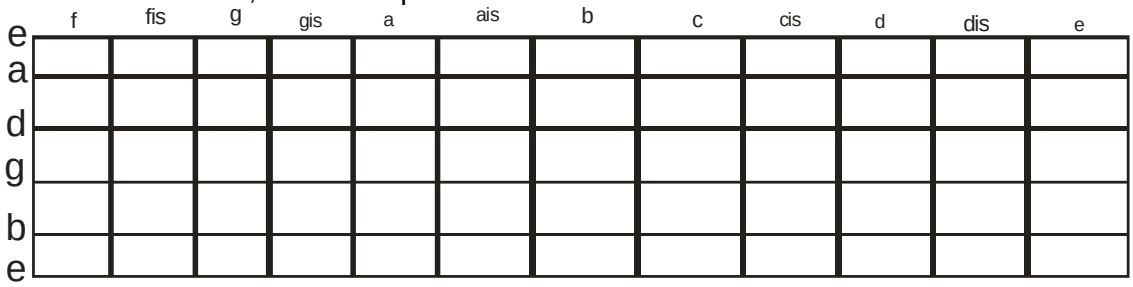
If the notes above are equated with the names of 17 tones written Rd. Machjar, it will be as follows

Table 2

Rakitan 17 nada on guitar

| Penamaan Rd. Machjar | Penamaan Gitar |
|---|---|
| Pangasih | C |
| Gulu Malang | Des |
| Pangasih Mir | Cis |
| Gulu | D |
| Dada Mal | Es |
| Gulu Mir | Dis |
| Dada | E |
| Panangis | F |
| Lima Mal | Ges |
| Panangis Mir | Fis |
| Lima | G |
| Nem Malang | Aes |
| Lima Miring | Gis |
| Nem | A |
| Barang Malang | Bes |
| Nem Miring | Ais |
| Barang | B |
| Pangasih | C |

When viewed from the table above, the Ermak 17 guitar has all the chromatic tones found in the 12-tone guitar. However, the Ermak 17 guitar has a 5-tone insert that the 12-tone guitar doesn't have. This is what distinguishes the Ermak 17 guitar from a 12 tone guitar. For more details, let's look at the picture of a 12-tone guitar in 1 octave to make the difference more visible, here's the picture :




Pic. 4 Guitar 12 notes in 1 octave

If you look at the picture, you will see the difference between the two guitars. There is a difference in the number of segments between an Ermak 17 guitar and a 12 tone guitar in an octave. This also makes the Ermak 17 guitar fingering technique different from the 12 tone guitar. On the 2nd segment in the Ermak 17 guitar there is an insertion of ges or five malls. Then there is a segment that is passed if we are going to play the chords contained in the 12-tone guitar.

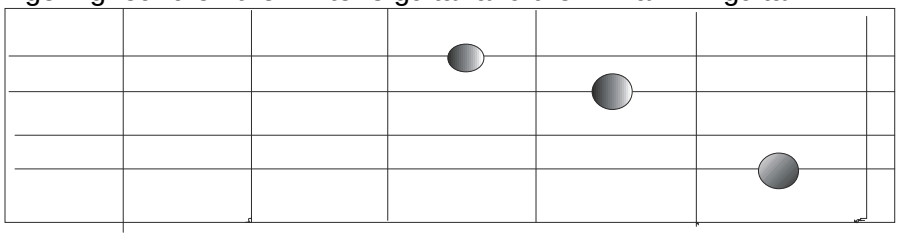
When viewed from the arrangement of the chromatic scales it will be as follows:

Gitar Ermak 17 nada :

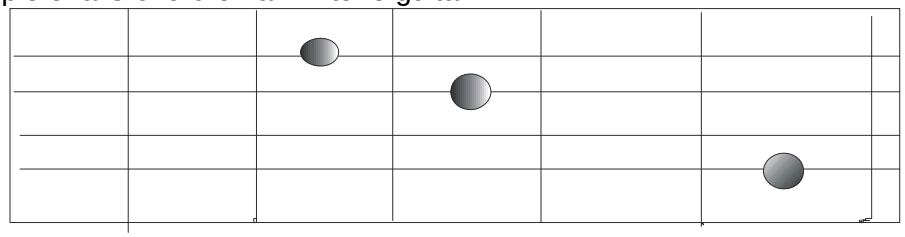
C-Des–Cis–D–Es–Dis–E–F–Ges–Fis–G-Aes–Gis–A–Bes–Ais–B-C

Gitar 12 nada :

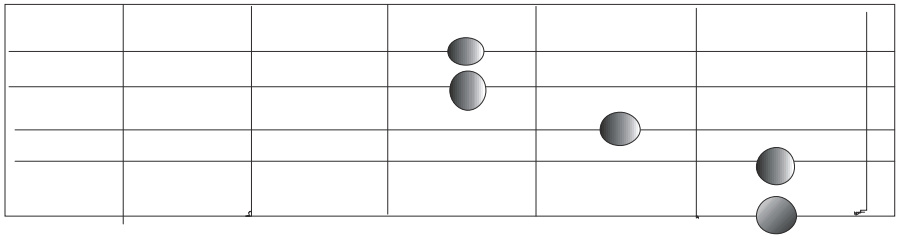
C-Cis-D-Dis-E-F-Fis-G-Gis-A-Ais-B-C For more details, here are some examples of diatonic chord fingering found on the 12-tone guitar and the Ermak 17 guitar:



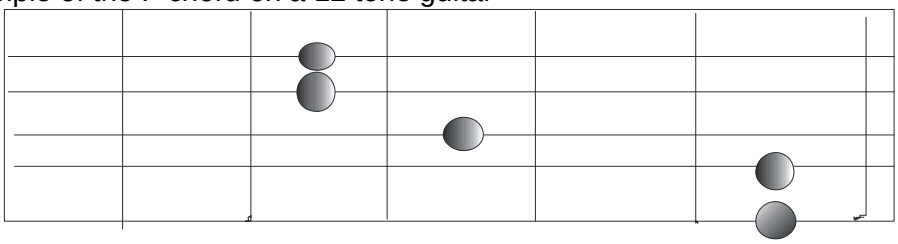
Iic. 5 Example of a C chord on a 1 2 tone guitar



Pic. 6 Example of a C chord on an Ermak 17 . guitar



Pic.7 Example of the F chord on a 12 tone guitar



Pic.8 Example of the F chord on the Ermak 17 . guitar

It is clear that in Ermak 17's guitar, to perform diatonic chords, one must pass through one segment, because the 2nd segment is an insertion note. However, with a certain count the Ermak 17 guitar doesn't mean it can't be played. To play the Ermak 17 guitar, it is necessary to have a new finger adaptation. If you get used to it and learn it well, it won't be a problem playing the Ermak 17 guitar.

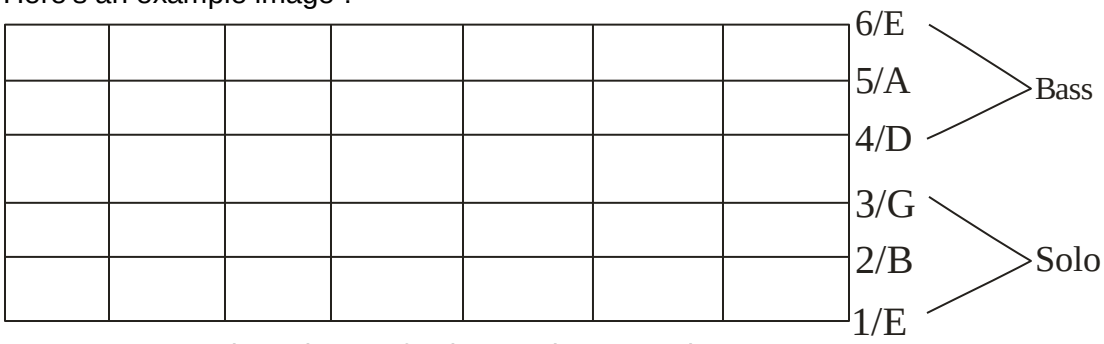
On an Ermak 17 or 12 tone guitar, the number of strings is the same, namely six strings. The order of the resulting tones is also the same. Here is the order of notes on each string:

- The first string. This string is at the bottom of the sequence. This string is called the E string.
- Second string. This string is second from the bottom. This string is called the B string.
- Third string. This string is third from the bottom. These strings are called G strings.

- Fourth string. This string is third from the top. This string is called the D string.
- Fifth string. This string is second from the top. This string is called the A string.
- Sixth string. This string is at the very top. This string is usually an E string.

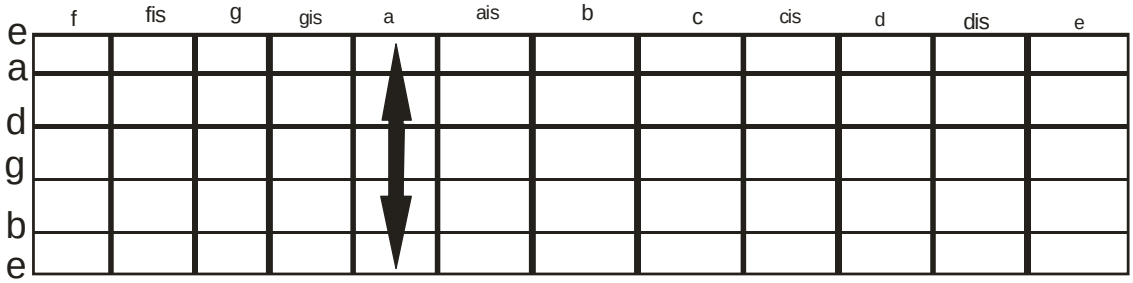
The three strings at the top are called the bass strings, the three strings from the middle to the bottom are called the solo strings.

Here's an example image :




Pic.9 Picture of string captions on guitar

Tuning or commonly called tuning is the process of finding the right tone to produce the perfect sound. If a musical instrument has not gone through the tuning process, it will be difficult to accompany the song that will be sung. The tuning process is usually done in two ways, namely manual and digital methods. Manual processes usually rely on the sensitivity of our ears to produce the perfect tone. The basic pitch benchmark can follow a tuning fork or other instrument. The digital process is carried out using a special tool called a tuner. Tuner is an electronic tuning device that is able to show the desired tone or frequency. With this tool we just follow the direction of the needle or light to get the perfect tone. In this section the author will explain the manual tuning system on the Ermak 17 guitar. If the Ermak 17 guitar is tuned using a tuner, the process will be the same as for a 12 tone guitar. To find out more about the tuning process, let's compare the tuning process for a 12-tone guitar with an Ermak 17 guitar using this picture :




Pic. 10 Tuning system on 1 2 tone guitar

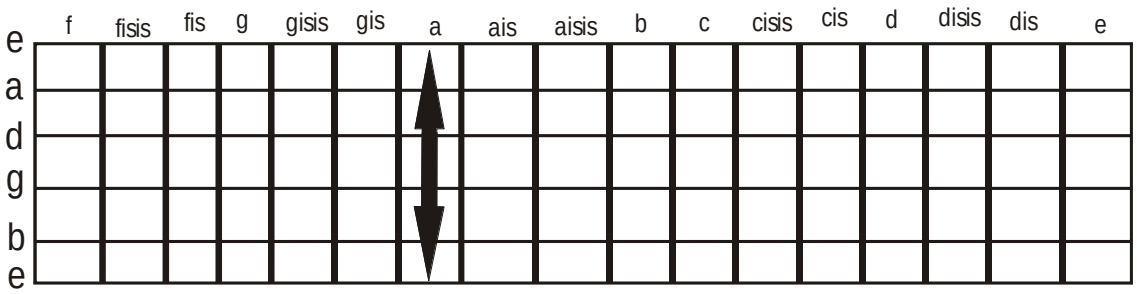
On a 12-note guitar, tuning is done on the 5th fret (except on the 3rd string or the G note, the tuning is done on the 4th fret).

- 6th string with 5th fret / column equals 5 . string
- 5th string with 5th fret / column equals 4 string
- 4th string with 5th fret / column equals 3 string
- 3rd string with 4th fret / column equals 2 string
- 2nd string with 5th fret / column equals 1 . string

Usually for determining the basic tone is determined by the string to one or the E string. To get this frequency, the basic tone is usually equated with other musical instruments or with a tuning fork.

Information :

The arrow in the image above shows the 5th column (the area of the column that determines the frequency of the strings to be tuned).




Pic.11 Tuning System on 17-tone guitar

On the Ermak 17 guitar there is an insert note that makes the tuning done on the 7th fret (except on the 3rd string or the G note, the tuning is done on the 6th fret).

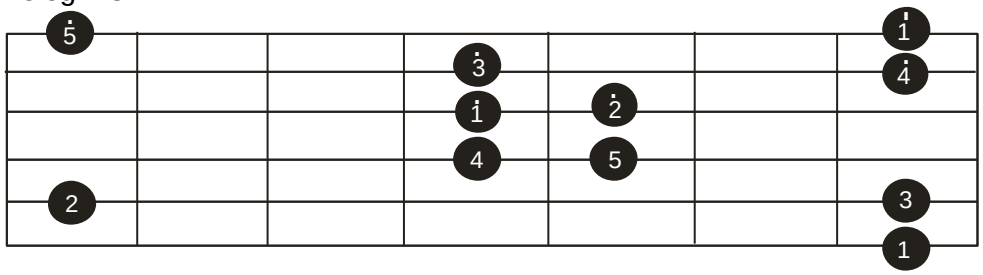
- 6th string with 7th fret / column equals 5 string
- 5th string with 7th fret / column equals 4 string
- 4th string with 7th fret / column equals 3 string
- 3rd string with 6th fret / column equals 2 string
- 2nd string with 7th fret / column equals 1 . string

For this Ermak 17 guitar, the determination of the basic tone is not fixed on the 440Hz frequency (A tone). Unless Ermak's guitar is used to accompany songs with standard diatonic scales. If the Ermak 17 guitar is used to accompany Sundanese songs, the basic tone can be adjusted with other tools or instruments that accompany the song. For example, the basic tone of the guitar is equated with the basic tone of the *Kacapi* or *suling.*

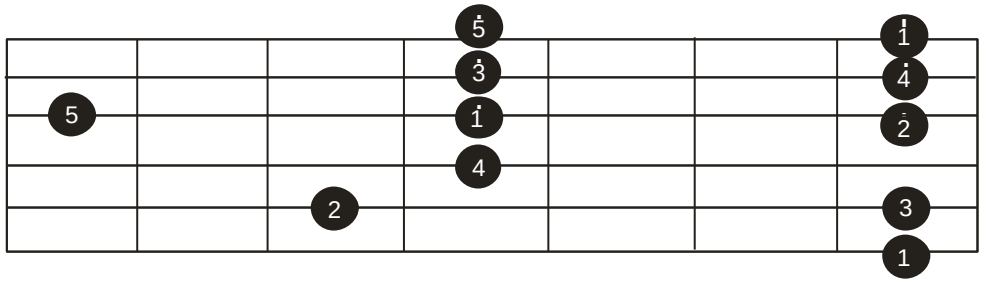
Information :

The arrow in the image above shows the 7th column (the area of the column that determines the frequency of the strings to be stemmed).

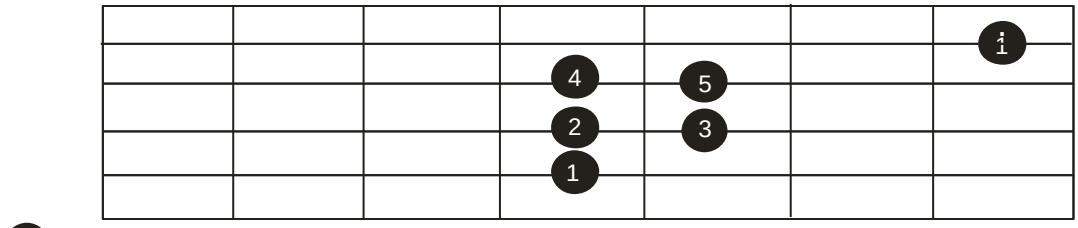
Pelog DO = F




Salendro Do = F




Madenda Do = Dm




1 → Nada Da
2 → Nada Mi
3 → Nada Na
4 → Nada Ti
5 → Nada la
i → Nada Da (rendah)

***CONCLUSION***

Derrida's deconstruction is a way of rereading a text (object) including cultural text (object of culture), which is another meaning that may be very different from the meaning that has existed before. In this context, Raden Machjar performs a deconstruction of a 12-tone guitar to produce a 17-tone guitar. The 17-tone guitar, which is one of Raden Machjar's inventions, has contradictory meanings and provides another view and another way of seeing and playing a guitar. Raden Machjar's big question about the differences between western music and Sundanese karawitan gave birth to a deconstruction of the guitar. Raden Machjar rejects the old structure that has been prevalent in the guitar and gave birth to a new structure. The fret scale on the guitar is an important focus on this 17-tone guitar. By not changing the shape of the guitar in general, but Raden Machjar has a new way of playing and discovering a guitar. The 17 tone guitar is a new offer for a guitar that is multi-tuned (can play multiple tunes).

In cultural studies, Derrida's deconstruction has an important influence. Thanks to Derrida's deconstruction, meaning is no longer seen as absolute truth, universal truth, and stable truth, but meaning is always changing. It is as if there is no "concrete" offer in the deconstruction method, but deconstruction is like wanting something hidden to be more visible and present. Deconstruction provides openness to other things, respect for differences. Respect for these differences can pave the way for appreciation of a local, ethnic, community, and cultural approach in general. This is what enriches a nation and will have a characteristic.

In the study of the deconstruction of a 17-tone guitar against a 12-tone guitar, we see a local advantage that our nation has. These advantages need to be known and listened to in more depth by many audiences. It is possible that there will be another deconstruction of the 17-tone guitar created by Rd Machjar. This will further enrich the culture of our nation towards a better and known by the world. From this research, with the data obtained, this paper can convey the difference between a 17-tone guitar and a 12-tone guitar. It is clear that playing a 17-tone guitar requires a new adaptation and a new technique. It is not impossible that this 17 tone guitar is used and becomes a guitar that is indeed the most appropriate to be played in our nation and even in the world.

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