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1. Detail Image 1



- I Switch On
- II Note Selection Switch
- III Set & Reset Pushbutton
- IV Musical Scale Selection Switch

1. Detail Image 2



II Note Selection Switch

For models with Harley Benton rotary switches use the setscrew as a marker.

The chord adjusting disc is put on the scale of the note selection switch in detail image 2.

2. Switches & Functionality

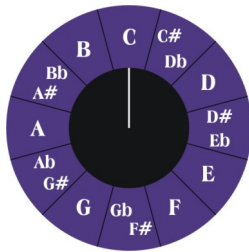
I Switch On

The black sliding switch is located on the bottom right at the pick guard. (detail image 1)

The switches has 3 positions P1, P2 and P3

P1 **OFF**

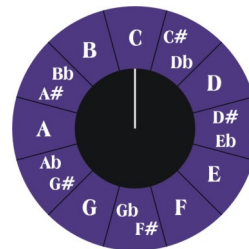
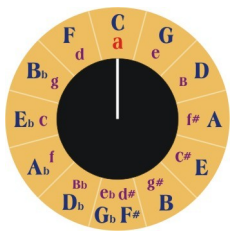
P2 **Note Selection ON**



P3 **Musical Selection Switch ON**

+

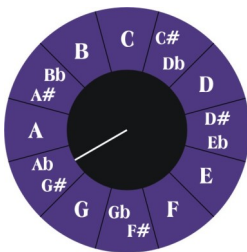
Note Selection ON



2. Switches & Functionality

II Note Selection Switch

This one is placed on the top left body side. (detail image 1 and 2)



The scale contains 12 notes.

Fields twice named e.g. Ab, G# illustrates one and the same note.

According to the current position of the rotary switch the note is displayed.

Each note appears with his octave notes red on the fretboard.

Notes marked in the 12. fret include the open string.

By removing the rotary knob do the following steps to fit:

Fit the rotary knob in any position and tighten the setscrew slight. Spin the rotary knob again the clock until stop. Unloose the setscrew and position it on C. Tighten the setscrew.

III Set und Reset Pushbutton

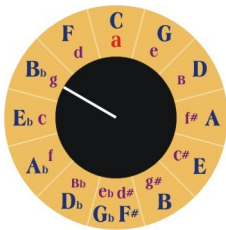
This one is located top left at the pick guard. (detail image 1)

- with the red set pushbutton is any note storable.
- the black reset pushbutton reset all stored notes.

2. Switches & Functionality

IV Musical Selection Switch

This one is located top right at the pick guard. (detail image 1)



the scale contains 12 keys arranged in circle of fifths.

Each field is named twice. E.g. **Bb** und **g**. The blue capital letters mark the major and the purple small letters the minor scale.

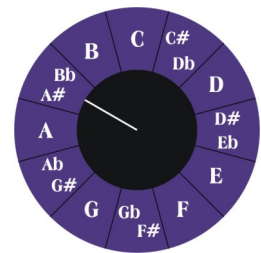
The fretboard display 7 notes and the octaves too.

Setting instructions

Musical scale **Bb** major

Set musical scale selection switch as shown above to position Bb.

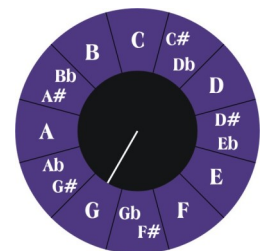
Set note selection switch to Bb , A#.



Musical scale **g** minor

Set musical scale selection switch as shown above to position g.

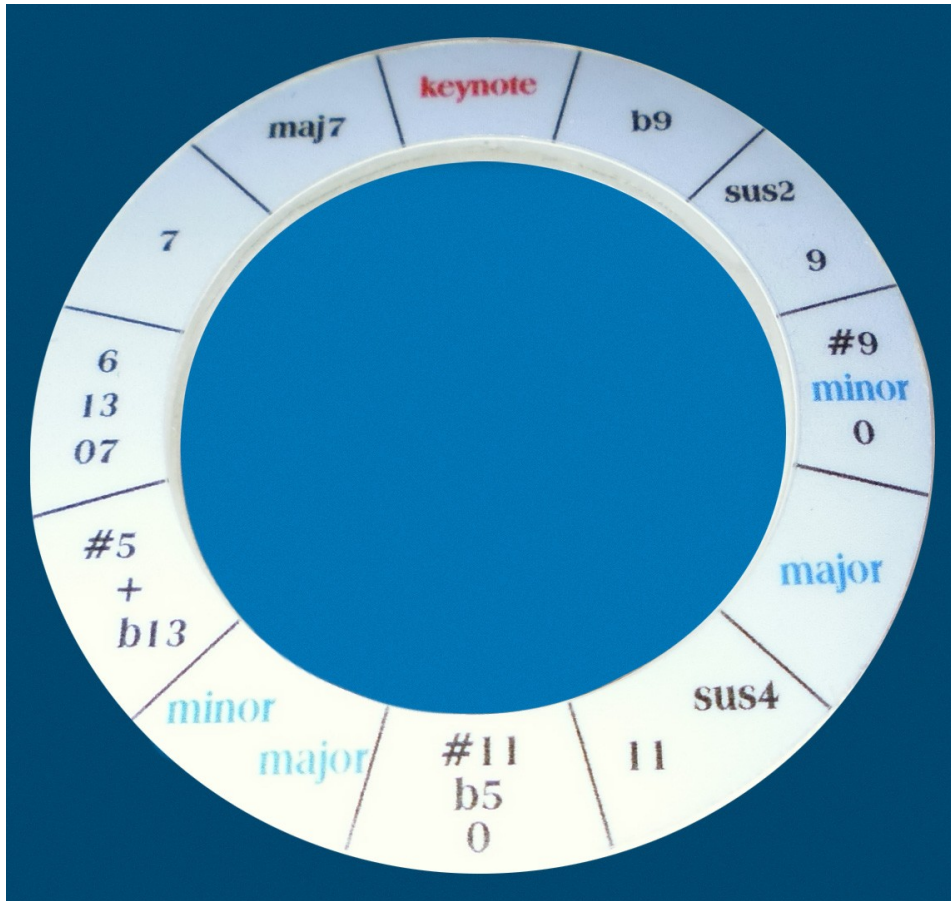
Set note selection switch to G.



Both musical scale only distinguish in the different reference note.

3. Chord Adjusting disc

Chord Adjusting disc



The supplied chord adjusting disc can use to adjusting chords. Put on the scale of the note selection switch. The disc moves slight. Don't apply pressure to harming the varnish.

The process to adjusting chords is written on the following pages.

4. Chord Settings

Chord Settings

The following adjusting method explain the chord settings by free chosen chords which not directly correlate.

d minor Bb major E 7 G sus2 C add9

Beforehand some information about the notation of chords.

The basic chord name is represented by the first letter. It follows the chord type and next up the chord token.

The **basic chord name** is the base note readable on the note selection scale. See detail image 2 .

The **chord type** may major or minor or sus2 or sus4 . Capital Letter for major and lower case or capital +m the minor .

The **chord token** are at the end and are mostly number as well as maj 7 and add9

	d minor	Bb major	E 7	G sus2	C add9
Chord basic name	d	Bb	E	G	C
Chord type	minor	major	major	sus Typ	major
Chord token			7		add9

The supplied chord adjusting disc can use to adjusting chords. Put it on the scale of the note selection switch. The disc is slightly turnable.

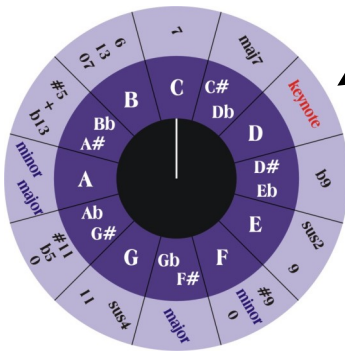
The scale of the disc contains one field labeled keynote. This one represent the basic chord name. In addition chord type and chord token are situated on the fields.

4. Chord Settings

Setting instruction

d minor

Step 1

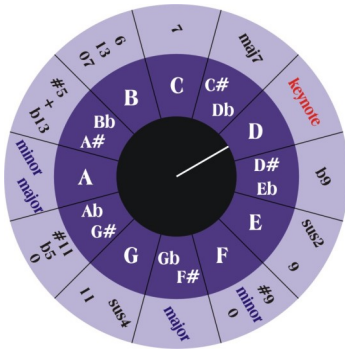


Spin the chord adjusting disc so that the keynote field match with the basic chord name. This one D is find on the scale of the note selection switch.

The position of the note selection switch never mind.

After don 't move the disc.

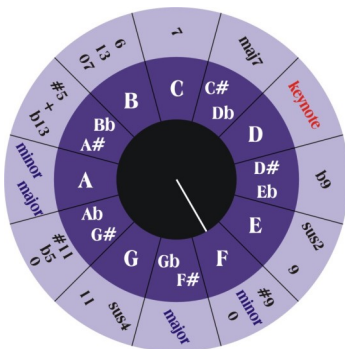
Step 2



Place the note selection switch also to the basic chord name.

Save D with the set pushbutton.

Step 3

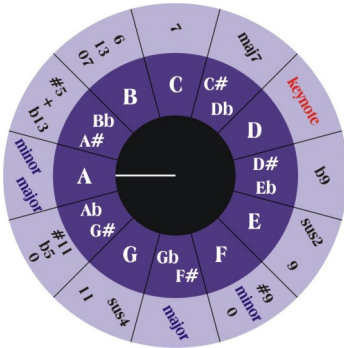


The chord type is minor so place the note selection switch to the minor field on the disc.

Save F with the set pushbutton.

4. Chord Settings

Step 4



Spin the note selection switch to the another minor field.

Save A with the set pushbutton.

The chord type is adjusted.

d minor has no chord token so that the setting is finish.

Now the fretboard illustrate all notes belongs to d minor. Each used strings must pressed by the red marks for d minor.

The open strings which may sound are marked in the 12. fret.

Easy find various combinations for play d minor and use the different frequency spectrum.

Each setting chord displays with all their reversals arranged in lay.

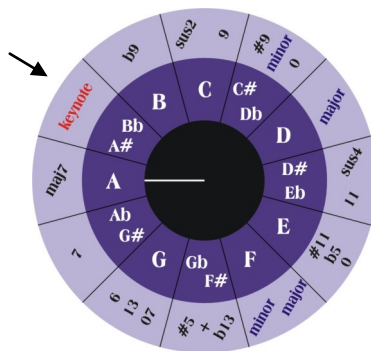
The user can simply try out the different possible grips and it has to don't always sound the whole chord.

4. Chord Settings

Setting instruction

Bb major

Step 1

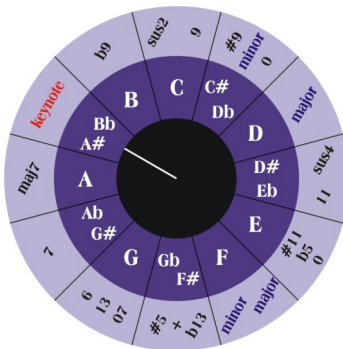


Spin the chord adjusting disc so that the keynote field match with the basic chord name. This one Bb is find on the scale of the note selection switch.

The position of the note selection switch never mind.

After don 't move the disc.

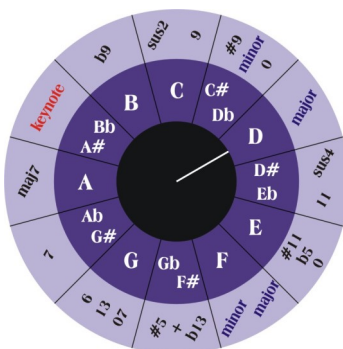
Step 2



Place the note selection switch also to the basic chord name.

Save Bb with the set pushbutton.

Step 3

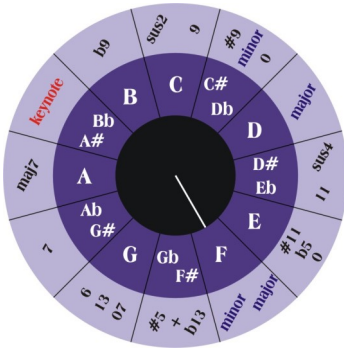


The chord type is major so place the note selection switch to the major field on the disc.

Save D with the set pushbutton.

4. Chord Settings

Step 4



Spin the note selection switch to the another major field.

Save F with the set pushbutton.

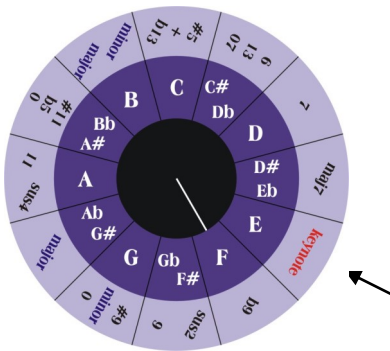
The chord typ is appointed.

Bb major has no chord token so that the setting is finish.

4. Chord Settings

Setting instruction E 7

Step 1

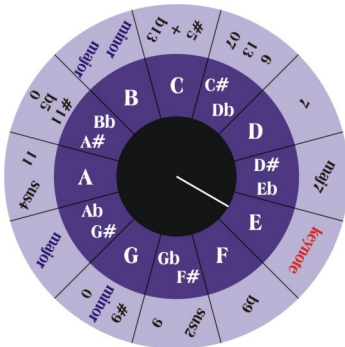


Spin the chord adjusting disc so that the keynote field match with the basic chord name. This one E is find on the scale of the note selection switch.

The position of the note selection switch never mind.

After don 't move the disc.

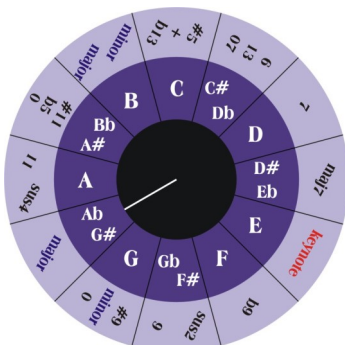
Step 2



Place the note selection switch also to the basic chord name.

Save E with the set pushbutton.

Step 3

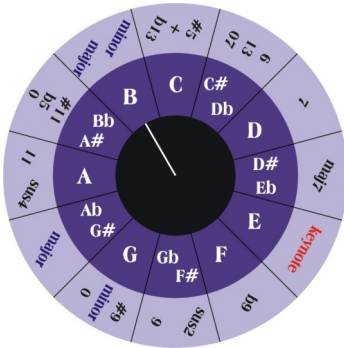


The chord type is major so place the note selection switch to the major field on the disc.

Save (Ab , G#) with the set pushbutton.

4. Chord Settings

Step 4

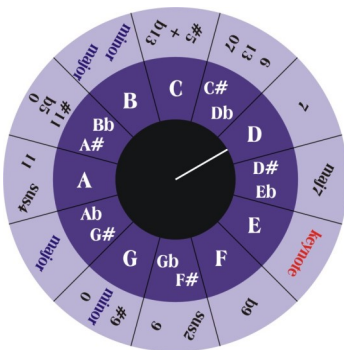


Spin the note selection switch to the another major field.

Save B with the set pushbutton.

The chord typ is adjusted.

Step 5



The chord token is 7.

Place the note selection switch to the field marked 7 on the disc.

Save D with the set pushbutton.

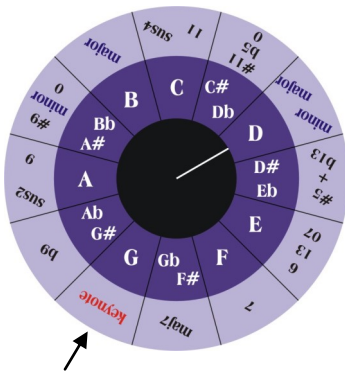
Now the chord E 7 is appointed.

4. Chord Settings

Setting instruction

G sus2

Step 1

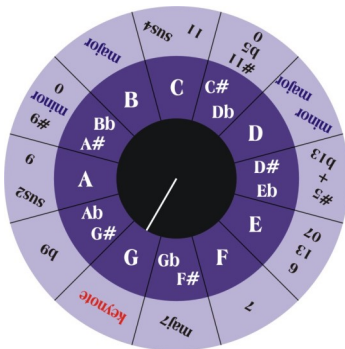


Spin the chord adjusting disc so that the keynote field match with the basic chord name. This one G is find on the scale of the note selection switch.

The position of the note selection switch never mind.

After don 't move the disc.

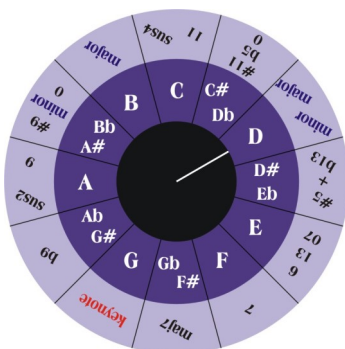
Step 2



Place the note selection switch also to the basic chord name.

Save G with the set pushbutton.

Step 3



The chord type is sus. For every sus type the third is omitted.

The third is where minor or major singled in the field.

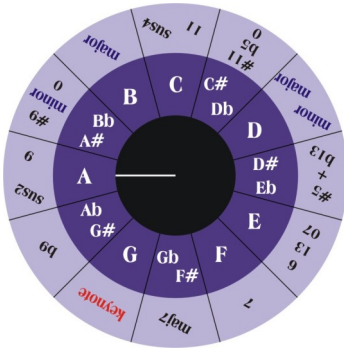
The fifth is where minor and major are together in the fields.

Place the note selection switch to the fifth.

Save D with the push button.

4. Chord Settings

Step 4



The chord token is sus2.

Place the note selection switch to the field marked sus2 on the disc.

Save A with the pushbutton.

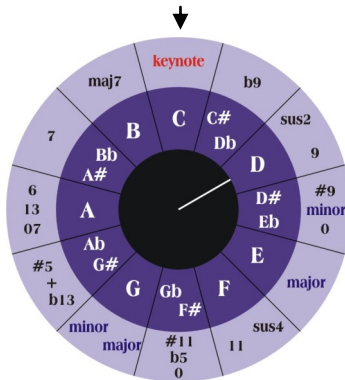
The chord typ is adjusted and the chord G sus2 is appointed.

4. Chord Settings

Setting instruction

C add9

Step 1

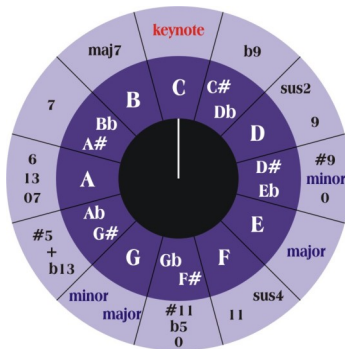


Spin the chord adjusting disc so that the keynote field match with the basic chord name. This one C is find on the scale of the note selection switch.

The position of the note selection switch never mind.

After don 't move the disc.

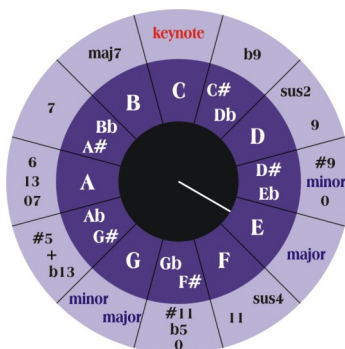
Step 2



Place the note selection switch also to the basic chord name.

Save C with the set pushbutton.

Step 3



The chord type is major so place the note selection switch to the major field on the disc.

Save E with the set pushbutton.

5. Applications

In the following the use of this learning aid on the listed topics is described.

- I Overview of the position of the octave notes
- II Composing guitar riffs
- III Learning chords
- IV Notation and determination
- V Playing in different scales
- VI Aid for composing

5. Applications

I Overview of the position of the octave notes

Octave position on the sample tone a

- 1.Octave
- 2.Octave(110 Hz) E5 , A0
- 3.Octave E17 , A12 , D7 , G2
- 4.Octave(440 Hz) D19 , G14 , H10 , e5
- 5.Octave e 17

Each set notes lights up 6 times. Since the note is also marked in the 12th fret (A12) this open String belong to it.

II Composing guitar riffs

On the notes of a chord using various lay it is easier to create good sounding guitar riffs. Most is only one additional chord token required such as 11, + , 6 or 7.

This can be set with the chord adjusting disc.

Use mostly the tonic see page 23.

III Learning chords

Without fingering charts the different variations of a chord to grip is recognizable. The user can try out what is the best for him or where the chord sounds best. Even advanced player can easily discover new grips.

Barre grip types are sometime indispensable but cumbersome to grip. Due to certain gripp combinationen it is often possible to bypass .

It is important to ensure that strings that are not allowed to sound are muted or not strike .

5. Applications

IV Notation und determination

A found guitar tab can notice, notate and determined with the help of the note selection switch.

Place the light point on each finger used in frets and read and notate the note from the scale of the note selection switch. By sounded open strings place the light point to the 12th fret.

Most of keyboards or computer programs have a chord identification system.

Put the notated notes from deep to high in.

Any time the notated notes can set again and the chord is illustrated.

5. Applications

V Playing in different scales

The user has the opportunity to try out different scales. This can lead to new song ideas.

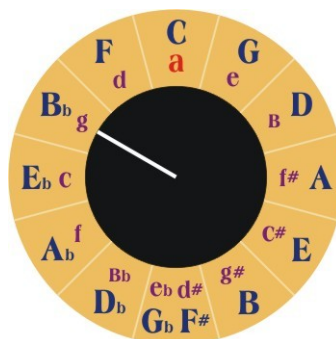
As soon as sounds more than one yellow note a chord form was built from the scale.

If several marked tones sound at the same time a chord formation is automatically formed that fits this key played.

The user can find chords that go together without chord knowledge.

VI Aid for composing

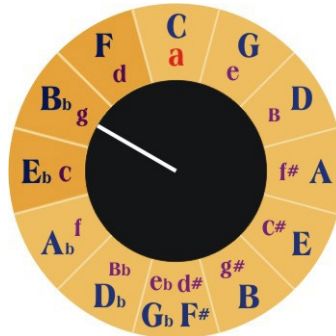
The circle of fifths can be used as a compositional aid. The scale represents both tones as well as chords.



The fundamental tone is set in Bb or in g with the tone selector switch.

5. Applications

Possible chords that can be used to compose without changing the key Example of **Bb**



Tonic **Bb**
 Subdominant **Eb**
 Dominant **F**

Minor Tonic **Gm**
 Minor Subdominant **Cm**
 Minor Dominant **Dm**

- + Change the minor to major **G, C, D**
- + Chord modification such as sus, add9, maj7, 7 and others

Set a chosen chord, for example, subdominant. The apparent inversions can be used to finger the chord or parts of it in other positions to be able to use techniques such as sliding strings up or down.

In addition, it is the case that a chord in different positions and inversions sounds different. These frequency nuances further expand the above harmonic spectrum. For example, an expected dominant jump can be replaced and the Song gets a different character.

With other keys selected, this arrangement is only shifted. The dominant lies always clockwise from the tonic in pointer position.

6. Stings Change

String change can be done as usual by Fender.

The original diameter in inch.

E	0.042
A	0.032
D	0.024
G	0.016
B	0.011
e	0.009

7. Downtuning & Capotasto

For downtuning adjust the rotary knobs so that the system remains valid.

E.g. downtuning 2 halftone:

Turn the note selection switch to the left stop. In that position C is illustrated. Unloose the setscrew and place the switch from C two halftones left to Bb. Tighten the setscrew.

Turn the musical selection switch to the left stop. In that position C major scale is illustrated. Unloose the setscrew and place the switch to Bb. Tighten the setscrew.

A Capotasto can use without doing anything the system remains valid.

8. Neck & Pick Guard & Tremolo

Don't remove the neck and the pick guard. Indeed both it is possible but the fitting is tricky.

An adjustment of the neck via the truss rod is not possible and also not necessary.

Tremolo can not use.

9. Batteries charge

to charge the battery it is necessary to remove it.

With fully charged 2400 mAh batteries a playing time of min. 59 h and max. 590 h is available depending on the display system used. Approximately **133 hours** can be expected with average handling.

Remove the batteries

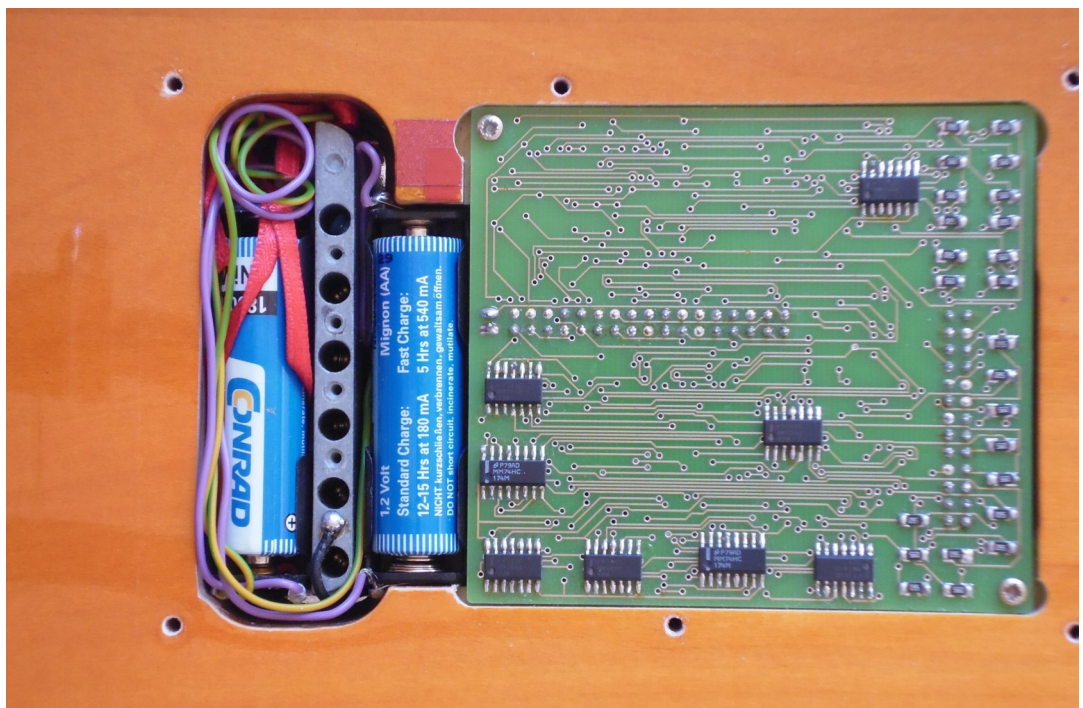
Step 1

Down tune the strings. To do this turn the tensioning mechanics at the headstock 3 whole rotation in a clockwise direction.

Step 2

Place the guitar with the back up on a suitable soft surface. After unscrewing the cover plate results in Figure 1.

Figure 1



9. Batteries charge

Step 3

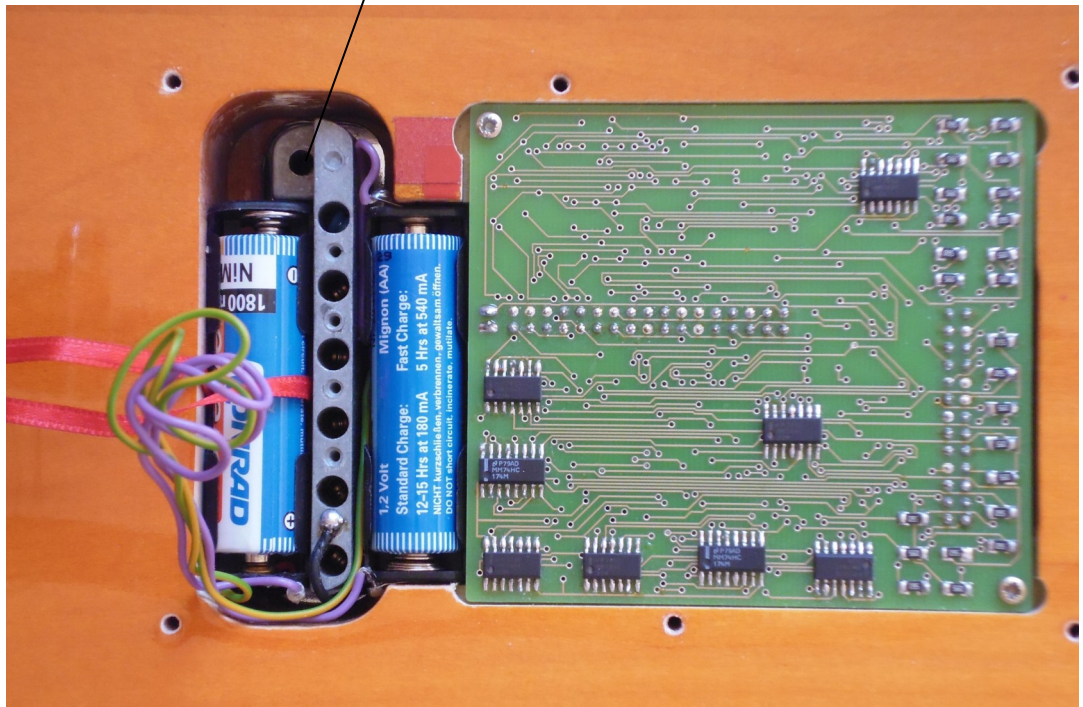
Take out the battery located next to the printed circuit board. A finger of one hand presses the spring and pulls up while the other hand's fingers hold the battery sideways. In this process the circuit board don't need to touch. There is no risk of electric shock but avoid to put the hands on the circuit board.

Step 4

Next pull the cable and the holder loop out of the trough. In the released hole (Figure 2) the delivered spacer (Figure 3) is inserted and not rotated.

put spacer in that drilled hole

Figure 2



9. Batteries charge

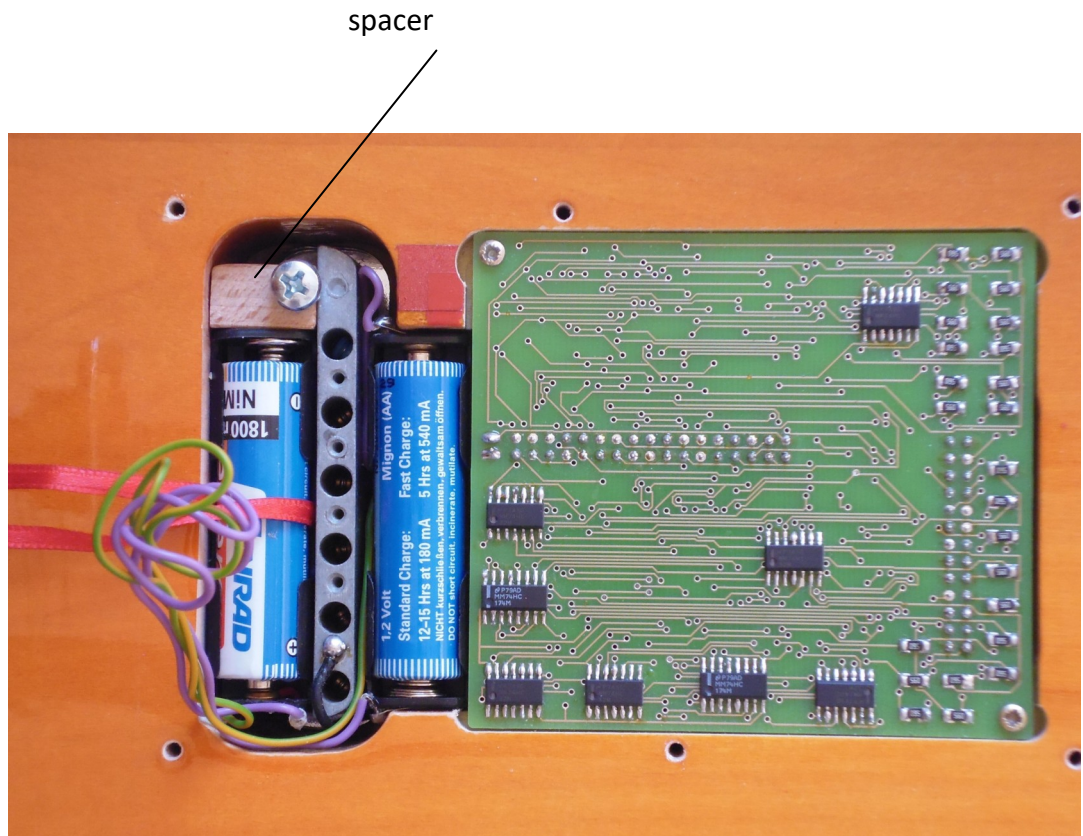
Step 5

The battery holder can now be pulled out with the holder loop. The cable is long enough to change the battery outside of the body.

Step 6

Charging the 3 batteries with an external charger. After reinserting the batteries (Figure 3) the spacer is pulled out with the fingertips on the screw. Stow away cables and the holder loop. Screw the cover plate.

Figure 3



When replacing the batteries the Mignon AA NiMH 1.2 V type battery should be used. Installing batteries with more than 1.2 volts is not permitted.

10. Maintenance

All guitar parts are best cleaned and polished with a linen cloth. The use of cleaning agents is only recommended for heavier soiling. Put a drop of standard dishwashing liquid in a glass of water and damp the linen cloth.

- Clean the body paint by breathing on it or using a damp linen cloth and then polishing it to high gloss .
- Carefully remove dust or dirt from the pickguard paint without applying too much pressure .
- Clean the neck with a breath or a damp linen cloth and polish with a breath.
- Cleaning and polishing the fretboard is possible. Remove strings beforehand. Clean and polish with a breath.
- Clean chrome and plastic parts with a breath or a damp linen cloth and polish with a breath.

Do not remove the neck or pickguard.