

## Guitars and basses setup

**Basic information on setting up electric guitars and basses: truss rod adjustment, action, intonation. An article written by our specialist from the finishing department.**

### **I. To start things off:**

Before tuning your instrument I suggest acquiring:

- **An accurate tuner** - chromatic with a needle would be the best. It will help us to accurately adjust the intonation.
- **Fresh strings** - it is of course possible to tune the instrument with old strings, however it may prove as a wasted effort. Old strings do not intonate properly and also show incidental fluctuations in pitch. Thus, if you would prefer to avoid unpleasant surprises during rehearsals and concerts - I strongly suggest acquiring a fresh set.

The position of the instrument during tuning is also an important matter. I recommend performing this action in your normal playing position, which is with the guitar on your knee, or hanging on a strap. Laying the instrument on a table or on your knees may result in a shift in forces working on the neck and make setting up the action more difficult.

In general, a poorly set up instrument may cause stress, many dangerous illnesses and may ultimately lead to suddenly losing a gig, and you don't want that. :)

### **II. Tools**

#### **ELECTRIC GUITARS:**

- tune-o-matic style bridge: flat screwdrivers 5 mm and 8 mm + Allen keys 4.0 or 5.0
- Vintage tremolo bridge: Phillips screwdriver ph1 + Allen keys 1.5 and 4.0 or 5.0
- Floyd Rose style bridge: Allen key 3.0 or 3.5, 2.5 (intonation) and 4.0 or 5.0.

#### **BASS GUITAR:**

- All bridges: Allen keys 1,5 or 2,0

### **III. Setup**

#### **ELECTRIC GUITARS - FIXED BRIDGES, TUNE-O-MATIC STYLE BRIDGES**

(Mayones: Setius GTM & GTM7, Regius, Maestro, Virtuoso)

***Attention: remember to check the tuning on your instrument after each setup action, as the tuning will be altered as an effect of the action.***

1. Tune your instrument.
2. Adjust the truss rod:

*By turning the wrench clockwise we stretch the truss rod, which causes it to straighten and to reduce the "bow". By doing the opposite, we make the neck more concave. In order to check the plane of the fretboard we press the E1 string on the first and the last fret. A well adjusted neck should be slightly concave - the clearance between the top of the VIII fret and the string reaching between 0,2 to 0,5 mm.*

3. Adjusting string action.

We measure the height of the strings above the XII fret. These numbers (measuring the

smallest distance between the string and the fret) should be around:

E1 - 1,6mm

E6 - 2,0 mm

#### 4. Adjusting intonation.

*The proper length of the active, vibrating part of the string has a crucial impact on how the instrument intonates in all positions. We adjust it in the following way: hit the open string and then hit the same string pressed at the XII fret. The pitch on the XII fret should be exactly one octave higher. This is where an accurate tuner comes in handy.*

*If after we hit the string pressed on the XII fret the hand of the tuner points left of the proper pitch, we must shorten the length of the string by moving the string's saddle forwards (In the direction of the neck.) We do it by adjusting the proper screw in the bridge. If the tuner's hand points right, we should lengthen the string by moving the saddle away from the neck.*

*The actions described above should be executed for all the strings.*

#### 5. Retune the instrument and it's ready to rock. :)

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## ELECTRIC GUITAR - VINTAGE TREMOLO BRIDGES

(Mayones: Setius VIN; Flame: Bell II, KTM II)

***Attention: remember to check the tuning on your instrument after each setup action, as the tuning will be altered as an effect of the action.***

1. Tighten the spring mounting claw with the springs at the back of the instrument's body. Try to do it tight enough for the strings not to raise the bridge after they are tuned.
2. Tune your instrument.
3. Adjust the truss rod:

*By turning the wrench clockwise we stretch the truss rod, which causes it to straighten and reducing the "bow" By doing the opposite, we make the neck more concave. In order to check the plane of the fretboard we press the E1 string on the first and the last fret. A well adjusted neck should be slightly concave - the clearance between the top of the VIII fret and the string reaching between 0.2 to 0.5 mm.*

#### 4. Adjusting string action.

We measure the height of the strings above the XII fret. These numbers (measuring the smallest distance between the string and the fret) should be around:

E1 - 1.6mm

E6 - 2.0 mm

#### 5. Adjusting intonation.

*The proper length of the active, vibrating part of the string has a crucial impact on how the instrument intonates in all positions. We adjust it in the following way: hit the open string and then hit the same string pressed at the XII fret. The pitch on the XII fret should be exactly one octave higher. . This is where an accurate tuner comes in handy.*

*If after we hit the string pressed on the XII fret the hand of the tuner points left of the proper pitch, we must shorten the length of the string by moving the string's saddle forwards (In the direction of the neck.) We do it by adjusting the proper screw in the bridge. If the tuner's*

*hand points right, we should lengthen the string by moving the saddle away from the neck.*

The actions described above should be executed for all the strings.

6. Retune the instrument and... play it! :)

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## **ELECTRIC GUITAR - FLOYD ROSE TYPE BRIDGES**

(Mayones: Setius PRO; Flame: BR, Bell III)

***Attention: remember to check the tuning on your instrument after each setup action, as the tuning will be altered as an effect of the action.***

1. Tighten the spring mounting claw with the springs at the back of the instrument's body. Try to tighten it enough for the clearance between the spring mounting claw and the body reach about 5mm.
2. Attach the tremolo arm and using Schaller Tremstop (a tool to block the tremolo in one position) set the bridge parallel to the strings. You can also use a stopper made of Plexiglas or hard felt placed between the bridge and the board.
3. We set the microtoners to the middle position, which will let us adjust the tension in both directions.
4. Tune your instrument.
5. Adjust the truss rod:

*By turning the wrench clockwise we stretch the truss rod, which causes it to straighten and reducing the "bow" By doing the opposite, we make the neck more concave. In order to check the plane of the fretboard we press the E1 string on the first and the last fret. A well adjusted neck should be slightly concave - the clearance between the top of the VIII fret and the string reaching between 0.2 to 0.5 mm.*

6. Adjusting string action.

We measure the height of the strings above the XII fret. These numbers (measuring the smallest distance between the string and the fret) should be around:

E1 - 1.6mm

E6 - 2.0mm

7. Adjusting intonation.

*The proper length of the active, vibrating part of the string has a crucial impact on how the instrument intonates in all positions. We adjust it in the following way: hit the open string and then hit the same string pressed at the XII fret. The pitch on the XII fret should be exactly one octave higher. This is where an accurate tuner comes in handy.*

*If after we hit the string pressed on the XII fret the hand of the tuner points left of the proper pitch, we must shorten the length of the string by moving the string's saddle forwards (In the direction of the neck.) We do it by adjusting the proper screw in the bridge. If the tuner's hand points right, we should lengthen the string by moving the saddle away from the neck.*

The actions described above should be executed for all the strings.

8. Tighten the string blocking device at the headstock, and using the microtoners tune the

guitar.

9. Loosen the spring mounting claw until either the tremolo arm or the stopper will be easy to remove. Then adjust the angle of the bridge using the screws of the spring mounting claw and set it parallel to the strings. Move the arm of the tremolo a few times in order for the strings and the springs to "sit" properly.
10. Retune the instrument and... voila!

## BASS GUITAR

*Attention: remember to check the tuning on your instrument after each setup action, as the tuning will be altered as an effect of the action.*

1. Tune your instrument to the desired pitch
2. Adjust the truss rod:

*By turning the wrench clockwise we stretch the truss rod, which causes it to straighten and reducing the "bow" By doing the opposite, we make the neck more concave. In order to check the plane of the fretboard we press the E1 string on the first and the last fret. A well adjusted neck should be slightly concave - the clearance between the top of the VIII fret and the string reaching between 0,2 to 0,5 mm.*

3. We measure the height of the strings above the XII fret. These numbers (measuring the smallest distance between the string and the fret) should be around:  
G1 - 2.3mm  
E4 - 2.5mm  
H5 - 2.6mm

Adjusting the height of the remaining strings try to keep the height similar.

4. Adjusting intonation.

*The proper length of the active, vibrating part of the string has a crucial impact on how the instrument intonates in all positions. We adjust it in the following way: hit the open string and then hit the same string pressed at the XII fret. The pitch on the XII fret should be exactly one octave higher. This is where an accurate tuner comes in handy.*

*If after we hit the string pressed on the XII fret the hand of the tuner points left of the proper pitch, we must shorten the length of the string by moving the string's saddle forwards (In the direction of the neck.) We do it by adjusting the proper screw in the bridge. If the tuner's hand points right, we should lengthen the string by moving the saddle away from the neck.*

The actions described above should be executed for all the strings.

5. Retune your instrument and... rule the low end!

Stay Mayo,

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Final assembly  
Mayones Guitars & Bases