

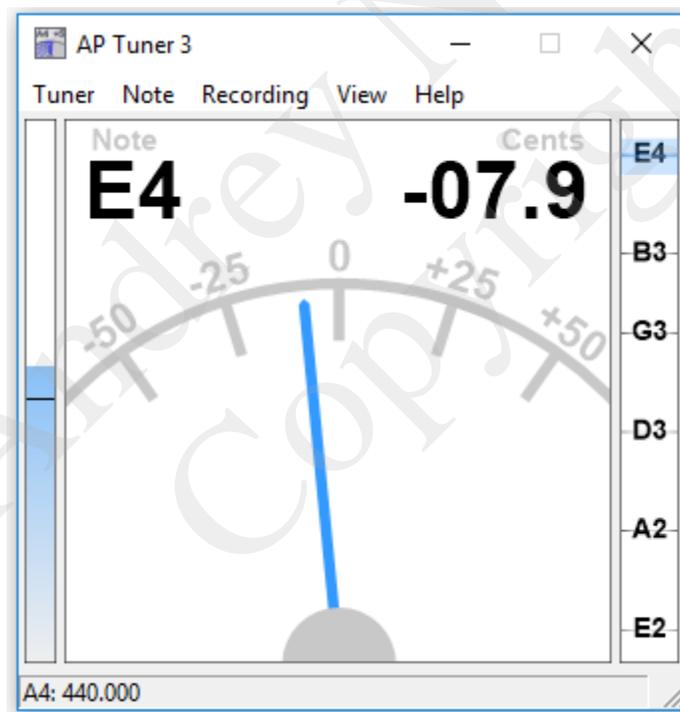
INSTRUCTIONS ON THE USE OF THE AP GUITAR TUNER



1. Purpose of the "AP Guitar Tuner". The software is designed for tuning the 6-string guitar. It can also be used for any other musical instrument.

2. The software is fairly simple to install. All you have to do is follow the instructions on the screen, and the software will be installed in a few moments. After the installation is over, connect a microphone (or switch on the built-in microphone). THE SOFTWARE WON'T WORK WITHOUT IT.

3. Launch of the software. When the program launches, a dialogue box will pop up for you to register the product on the website and enter the registration code. If you want, you can register the product (registration is paid). But you can also click on "Use tuner without registering" and use the tuner without registering it. The functions of the software will be limited, of course, but it's more than enough for our purposes: to tune the guitar. You'll still be able to tune your guitar according to the non-standard tuning systems, where all strings or one string usually deviate from the standard tuning parameters (details are specified below).



Pic.1

4. The software interface, as you can see from Picture No.1, consists of three panels: one big panel in the center and two narrow panels on the sides.

THE LEFT NARROW PANEL demonstrates the sensitivity of the input signal from the microphone. If the microphone works, the blue signal level indicator should go up and down. If the microphone doesn't work, the panel remains white.

THE RIGHT NARROW PANEL shows how much the pitch of the string being tuned deviates from the standard. In this case, the designation "E4" is designed for the first (thinnest) string, "B3" for the second string, "G3" for the third string, "D3" for the fourth string, "A2" for the fifth string, and "E2" for the sixth string.

THE CENTRAL PANEL is of the utmost interest to us because it plays a direct role in tuning guitar strings. It consists of three elements:

1 – Parameters in the upper left corner. These parameters change in accordance with the level of string tension, either in an ascending octave order – C, D, E, F, G, A, B, C, or in a descending octave order – C, B, A, G, F, E, D, C¹;

¹ Letter designations are given according to U.S. standards, where C is Do, D – Re, E – Mi, F – Fa, G – Sol, A – La, B – Si.

2 – Parameters in the upper right corner. These parameters show the direction in which you need to tune the string: if you see the "-" sign, you need to tighten the string; if you see the "+" sign, you need to loosen it until the "00" parameter;

3 – Scale with the moving pointer. The pointer can be in the "-" range (you need to tighten the string), in the "+" range (you need to loosen the string), or point at zero (you can consider the string tuned).

5. Standard guitar tuning. I will describe the tuning procedure for each string individually, in the same way that it is required in the software and in the order that is usually used for tuning strings.

TUNING OF THE FIRST STRING. The software uses "E4" as the standard for the first string. Pluck the first string and look at the right narrow panel. If the slider is below "E4", let's say, near "B3", you need to tighten the string. If the slider is above "E4", you need to loosen the string. I would say the right narrow panel is the panel of approximate tuning.

After you've approximately tuned the string, you need to achieve its exact sound. This time you will tune the string using the SCALE with the moving pointer and NUMERALS in the upper RIGHT corner of the CENTRAL panel. If the pitch of the string is flatter than the standard parameter, the pointer will be in the minus range of the scale, and numerals in the upper RIGHT corner of the central panel will have the "minus" sign, too. This means you need to tighten the string. If, on the contrary, the parameters show a "plus" sign, you need to loosen the string.

Attention! Before starting tuning, please, read the information in the section "General Tuning Rules" below.

The first string is considered tuned, if the upper LEFT corner of the central panel shows "E4," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner. In reality, there are three numerals in the upper right corner of the central panel, but you don't have to try to achieve the third zero since this is almost impossible to get. Two zeros are quite enough for a well-tuned string.

TUNING OF THE SECOND STRING. The second string is tuned in the same way as the first string (read the description). The only difference is that "B3" is used as its standard.

The second string is considered tuned, if the upper LEFT corner of the central panel shows "B3," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner (we've discussed that the third numeral of this indicator is not to be taken into consideration).

TUNING OF THE THIRD STRING. The third string is tuned in the same way as the first string (read the description). The only difference is that "G3" is used as its standard.

The third string is considered tuned, if the upper LEFT corner of the central panel shows "G3," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner (we've discussed that the third numeral of this indicator is not to be taken into consideration).

TUNING OF THE FOURTH STRING. The fourth string is tuned in the same way as the first string (read the description). The only difference is that "D3" is used as its standard.

The fourth string is considered tuned, if the upper LEFT corner of the central panel shows "D3," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner (we've discussed that the third numeral of this indicator is not to be taken into consideration).

TUNING OF THE FIFTH STRING. The fifth string is tuned in the same way as the first string (read the description). The only difference is that "A2" is used as its standard.

The fifth string is considered tuned, if the upper LEFT corner of the central panel shows "A2," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner (we've discussed that the third numeral of this indicator is not to be taken into consideration).

TUNING OF THE SIXTH STRING. The sixth string is tuned in the same way as the first string (read the description). The only difference is that "E2" is used as its standard.

The sixth string is considered tuned, if the upper LEFT corner of the central panel shows "E2," the pointer points at "zero," and "00" are the first two numerals in the upper RIGHT corner (we've discussed that the third numeral of this indicator is not to be taken into consideration).

To be honest, I only understand one half of the meanings of the standards in the software. To clarify, the sounds to which we tune the strings of the 6-string guitar with its standard tension are known by their Latin letter names: the first string and the sixth string – "E" (Mi: the sounds are the same, but the octaves² are different), the second string – "B" (Si), the third string – "G"(Sol), the fourth string – "D"(Re), – the fifth string – "A"(La)³. But, unfortunately, I can't figure out what the numerals "2", "3" and "4" near each letter mean. They probably provide us

² Octaves are taught in Lesson 5 of Andrey Nosov's Guitar School.

³ You can read about alphanumeric designations in Lesson 165 of Andrey Nosov's Guitar School or in the section "Useful Materials" on the website of "Andrey Nosov's Guitar School."

with some technical information which has nothing to do with music (they are definitely not the numerals designating octaves or additional chord tones⁴, as one might assume).

6. Tuning of the guitar with LOW string tension (the strings are looser than in standard tension parameters). Low string tension is used only in two cases:

- 1) To adapt muscles to playing techniques in the early stages of guitar learning⁵. In this case, we change the tension of all guitar strings, but the tuning system (the sound ratio between open strings) remains the same;
- 2) To extract sounds which are impossible to play using the standard string tension (for example, to produce a "D" on the sixth string⁶, which is lower than "E", which is the standard parameter for the open sixth string). In this case, we change only the tension of the desired strings while the tuning parameters of other strings remain the same.

To set up the tuning system with loosened strings, the software uses descending octave order with a minimum alternation step equal to a semitone (or the half-step)⁷ (the half-step is adjusted by means of sharp # and flat – b⁸ symbols). You can see how in the table below. It should be noted that the limit for low string tension should not exceed two tones⁹. Otherwise, the strings stop resisting and lose their sound.

The tuning parameters for low string tension are specified below (as a result of this procedure, the pitch gets lower so the term "lowering" becomes suitable).

String Number	Standard Parameter	Lowering by 0.5 Tone	Lowering by 1 Tone	Lowering by 1.5 Tone	Lowering by 2 Tone
①	E4	E \flat 4 or D \sharp 4	D4	C \sharp 4 or D \flat 4	C4
②	B3	B \flat 3 or A \sharp 3	A3	G \sharp 3 or A \flat 3	G3
③	G3	F \sharp 3 ¹⁰ or G \flat 3	F3	E3	E \flat 3 or D \sharp 3
④	D3	C \sharp 3 or D \flat 3	C3	B2	B \flat 2 or A \sharp 2
⑤	A2	G \sharp 2 or A \flat 2	G2	F \sharp 2 or G \flat 2	F2
⑥	E2	E \flat 2 or D \sharp 2	D2	C \sharp 2 or D \flat 2	C2

It should also be noted that in order to set up the most popular "D" (Re) tuning system, the standard parameter for the 6th string shall be changed to D2. The tension of the other strings remains the same.

7. Tuning of the guitar with HIGH string tension (the strings are tighter than in standard tension parameters). High string tension is used only in two cases:

- 1) To make the sound louder. In this case, we change the tension of all guitar strings, but the tuning system remains the same;
- 2) To make the performance of some musical compositions more comfortable. In this case, we change the tension of the desired strings while the tuning parameters of the other strings remain the same.

To set up the tuning system with high string tension, the software uses ascending octave order with a minimum alternation step equal to a semitone. You can see how in the table below. It should be noted that the limit for high string tension should not exceed one tone. Otherwise: a) the pressure on the neck will increase, which will further lead to its distortion; b) the strings will wear out more quickly; c) the strength required for holding down the strings may not suit your physical capabilities; d) the 1st (thinnest) string may break.

The tuning parameters for high string tension are specified below (as a result of this procedure, the pitch gets higher so the term "raising" becomes suitable).

⁴ You can read about additional tones in Lesson 163 of Andrey Nosov's Guitar School or in the section "Useful Materials" on the website of "Andrey Nosov's Guitar School," in the document called "Alphanumerical Designation of Chords."

⁵ Necessity for this procedure is explained in Lesson 1 of Andrey Nosov's Guitar School.

⁶ This system is specifically called the "D" (Re) tuning system and described in Lesson 109 of Andrey Nosov's Guitar School.

⁷ Semitone, also called a half tone, is one of the units for measuring the interval between musical sounds. The topic is described in Lesson 7 of Andrey Nosov's Guitar School.

⁸ Sharp and flat refer to the signs of alternation and described in Lesson 8 of Andrey Nosov's Guitar School.

⁹ Tone is one of the units for measuring the interval between musical sounds. The topic is described in Lesson 7 of Andrey Nosov's Guitar School.

¹⁰ It would be more logical to use only the sound G \flat 3, which is enharmonically equal to the first parameter, but the software indicates both. However, I'll provide you with all possible enharmonics. The topic "Enharmonics of Sounds" is described in Lesson 8 of Andrey Nosov's Guitar School.

String Number	Standard Parameter	Raising by 0.5 Tone	Raising by 1 Tone
①	E4	F4	F#4 or G \flat 4
②	B3	C4	C#4 or D \flat 4
③	G3	G#3 or A \flat 3	A3
④	D3	E \flat 3 or D#3	E3
⑤	A2	B \flat 2 or A#2	B2
⑥	E2	F2	F#2 or G \flat 2

It should also be noted that the tuning of the 5th string to the sound "Si" (B2 in the software), and the tuning of the 4th string to the sound "Mi" (E3 in the software) are considered the most frequently used options for high string tension. However, it's quite possible that you will have to change other strings as well. But it won't be that difficult anymore since you have this software, right?

8. General recommendations for tuning the guitar with the "AP Guitar Tuner" software:

1. When putting in new strings, slowly turn the tuning key, winding the string tightly around the tuning peg. When the string can produce a sound, turn to the next string. It's better to begin tuning the guitar, when the tension of all strings is close to the tension parameters of a tuned guitar¹¹;

2. If you loosen the tension of the strings more than the standard tension parameters, first you need to loosen them AS MUCH AS POSSIBLE and only then start tightening them to the required parameters. This will make the desired result easier to achieve.

3. Pluck the string a number of times in close succession, but then slow down or intentionally stop the sound after each pluck while tuning the sixth, fifth and fourth strings. Otherwise, THE SOFTWARE WILL NOT WORK CORRECTLY and start providing you with entirely different results.

In conclusion, I would like to advise you to learn to tune the guitar by ear because one day the tuner may not be close at hand. My manual can provide you with such an opportunity. In the learning process, you will get a chance to become familiar with a large number of guitar techniques which will help you not only to tune the guitar, but also to check whether it is correctly tuned or not. All you need to do is attentively follow the instructions and not be too lazy to practice.

That's all...See you in the section "Guitar Lessons" if you feel that you need to learn more (as an option for improving your skills) or in the section "Guitarist's Library" if you don't need training materials.

Andrey Nosov,
the author of the manual "Andrey Nosov's Guitar School"
and several hundreds of arrangements for guitar solo,
guitar ensembles, voice and guitar.

If you have downloaded this materials from somewhere on the Internet, now is the time to visit their home website and take a closer look at all the other interesting and useful materials.



Andrey Nosov's Guitar School presents:

1. Sheet music for guitar solo;
2. Sheet music for voice and guitar;
3. Sheet music for guitar ensembles;
4. Guitar lessons (learning the art of guitar playing and musical notation, analysis of musical compositions, know-how, and so on);
5. Vocabulary, reference materials;
6. Exercises for developing guitar playing techniques, guitar software and more.

I'd especially like to draw your attention to the online store where you can find a wide range of world-class compositions for guitar solo, guitar ensembles, and voice and guitar. Access to the website is free... The first page of the sheet music for any composition is available free of charge for listening and viewing... The prices will pleasantly surprise you...

I look forward to welcoming you to my website <http://www.guitarnosov.com>.



¹¹ Detailed information can be found in Lesson 1 of Andrey Nosov's Guitar School, which is free for viewing.