

Mobile-Tuner 1.2

A musical instrument tuner for java enabled mobile phones



Mobile-Tuner is a musical instrument tuner for java enabled mobile phones. In addition Mobile-Tuner has a built in metronome and a synthesizer:

- Keep your instruments in tune with Mobile-Tuner. Mobile-Tuner is tested with a variety of wind-, keyboard- and string-instruments. The tuner screen displays the note, the frequency and deviations in pitch. Furthermore, the signal of the captured sound is displayed graphically.
- The metronome can be set over a range from 40 to 208 beats. In addition, you can choose the number of beats per bar (1-12). If desired, you can switch off the sound and, for example, keep only the vibration set.
- The synthesizer simulates a piano. By pressing the navigation buttons different piano keys can be selected. By pressing the select button the mobile phone plays the selected tone.



What is new in Version 1.2:

- Faster recognition of frequencies.
- Calibration of reference tone a4 (440hz +54/-48hz).
- Additional analog display for the tuner.
- Additional metronome with simpler settings and tone generation for phones with limited processing speed.
- Additional settings for customizing Mobile-Tuner for your phone.
- Reminder upon first use of Mobile-Tuner not to forget to set permissions on multimedia.

System Requirements:

- Java enabled mobile phone
- Screen size 240 x 320 Pixel
- Your mobile must support audio capture of pcm data.

If you are not sure whether Mobile-Tuner works on your mobile phone, try the trial version.

Limitation: you may use the Mobile-Tuner trial version for 30 days. After 7 days you are remembered that you are using a trial only.

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The following guide will help you with the installation of Mobile-Tuner and help you to keep your instruments in tune.

Installation:

When having loaded and installed Mobile-Tuner to your mobile phone, you need to grant permissions regarding sound capture.

- On Nokia Mobiles open the Application Manager (App.Mgr.) and navigate to Mobile-Tuner. Open (Suite-)Settings and change *Multimedia* to *always allowed*, or *ask once*. On SonyEricsson Mobiles open *Applications* and navigate to Mobile-Tuner. Open *Option*. -> *Permissons* -> *user defined* and change *Multimedia* to *ask once*.
- If you selected "File Capture" in the settings (necessary for SonyEricsson phones with older firmware) Mobile-Tuner additionally asks for permission to read and write to the file system. In this case you should answer: "yes, never ask".
- When you start the application your phone asks for permission to capture sound. Please reply with "yes, ask once" or "yes, never ask." The actual text varies depending on the phone.

If you do not set permissions accordingly, the instrumental tuner is disabled!

On the first launch of Mobile-Tuner you are reminded to set the permissions on multimedia:

Reminder on first run



Having launched Mobile-Tuner first time you are reminded to set the permissions on multimedia from „always ask“ to „ask once“ or „never ask“.

By pressing the right softkey you actually start Mobile-Tuner.

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Notes on tuning of musical instruments:

When you start the application Mobile-Tuner checks the capabilities and permissions to capture sound. If this prerequisite is not met, tuning of instruments is not possible.

Optionally you then can select a tuning range in the settings screen. At start the 4. octave is preselected. To tune on note a (440 hz) select the range C₄ - B₄ for example. After that switch to the tuner screen and play the note to tune. The meter shows deviations from the recognized note, the note and the recorded frequency (depends on the settings for the tuner screen). It is also possible to to calibrate the tuner by changing the frequency of the reference tone (A₄, 440 hz) .

Note:

- Pitch detection works best, when there is no or limited background noise.
- Play the note loudly with a steady volume to the microphone of your mobile phone.

Using Mobile-Tuner

Using Mobile-Tuner is very easy. You can call each function by using the 4 directional keys, the select button and the right softkey.



Example SonyEricsson

You can exit each screen by pressing the right softkey.

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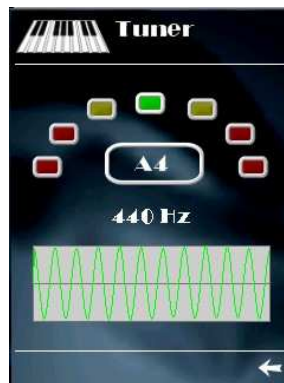
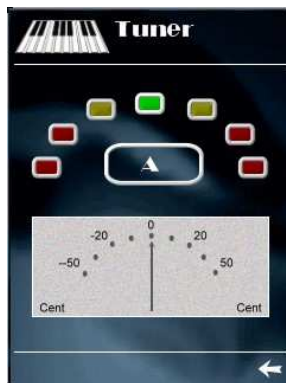


Screen menu



After launching Mobile-Tuner you get to the menu. From here you can call all the features of Mobile-Tuner. By using the direction keys you move the focus. Calling a function is performed by pressing the select button.

Screen tuner



Use the chromatic tuner to keep your instrument in tune. Please follow the instructions above.

You can exit this screen by pressing the right softkey.



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Screen metronome



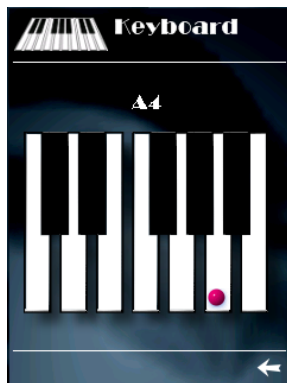
The metronome shows you the pace of a piece of music. By pressing the navigation keys "up" and "down" the focus is moved. By pressing the select button you can start/stop the metronome if the start or stop button owns the focus. Having moved to sound or vibration you can switch sound or vibration on or off. Having marked tempo or beats you can use the "left" and "right" keys to change them.

Under certain circumstances the metronome does not tick in time (older phone, slow production of midi-sound). In this case you should choose a "simple" metronome in the settings (see below). The simple metronome does not support sound or vibration settings nor blinking.

Note: some S60 Phones (Nokia) have problems with the vibration settings.

You can exit this screen by pressing the right softkey.

Screen keyboard



In the keyboard screen Mobile-Tuner simulates a piano. Default note is pitch a (440 hz). By the direction keys "left" and "right" you move the scale up and down. The tone is played by pressing the select button.

You can exit this screen by pressing the right softkey.

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Screen settings



In the settings you can choose your preferences for Mobile-Tuner. You can change:

- Language: english, german
 - Soundpattern of the metronome:
There are several sound patterns you can select from: Piano 1 to 4 and Drums 1 to 6. For this patterns the sound is based on midi. On phones, which do not or do not very well support midi sound production, you should activate one of the "simple" metronomes.
 - Speaker volume: for metronome and keyboard

 - Display of the tuner:
Note: analoge display like traditional tuners
Signal: display of frequency and signal
Spectrum: display of frequency and frequency spectrum
 - Range:
Select a tuning range by selecting an octave or the range D3 to H7.
 - Calibration
Change the frequency of the reference tone A4 by -48 hz to + 54 hz (440 hz by default)
 - Autoexit
Exit Mobile-Tuner after 5, 10 or 15 minutes automatically. You also can switch off the „Autoexit“ feature.
- Attention:** There is a problem in the operating system of S60 phones when capturing sound. So you should use the tuner function of Mobile-Tuner on a S60 phone for about maximal 15 minutes and then do a restart. In the other case there is the possibility that the phone runs out of memory.
- Capture method:
memory (default): for all S60 phones and SonyEricsson phones with newer firmware
file: for SonyEricsson phones with older firmware (you have to set permission on file system to "aske once" or "never ask" when capturing to file).

You can exit this screen by pressing the right softkey.

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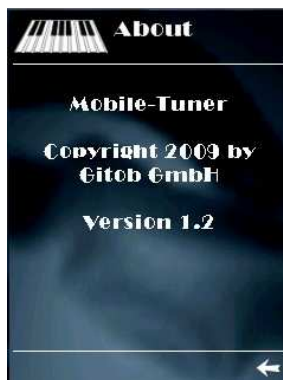
Screen help



The help screen displays this instructions in short.

You can exit this screen by pressing the right softkey.

Screen about



The about screen reports the version of Mobile-Tuner you have installed. Additionally the remaining trial period is shown, if you installed a trial version of Mobile-Tuner.

You can exit this screen by pressing the right softkey.

Mobile-Tuner FAQ

- Q: I cannot hear the metronome or keyboard sound.
A: Increase the speaker volume in the settings and at the mobile device.
- Q: The tuner seems to get no input signal.
A: - Check the preselected octave range.
- Avoid background noise.
- Play with steady volume for 1 sec. at least.
- Restart tuner screen.
- Q: I get an error message, when I switch to the tuner screen.
A: - Check compatibility of your Mobile Phone.
- Check the permissions for Mobile-Tuner.
- Change the capture method for Mobile-Tuner.