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Introduction

MetroMon v1.01 is a freeware program that runs on Windows 3.x, Windows 95/98 and Windows NT computers. It is intended to be an aid for musicians and contains following features:

both audio and visual **metronome**

instrument tuner (by keys, frequency or guitar strings)

uses the internal computer speaker, so there is no need for a sound card or MIDI device.

options include: frequency settings, speed, beats per measure.

For questions, problems, remarks or useful tips, contact the author:

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Setup parameters

All setup parameters are stored in the METROMON.INI file and automatically reloaded when the program is restarted.

Tempo

This value indicates the metronome speed. It is expressed as the number of quarter notes per minute. For common settings see the Tempo indicator table

Minimum value: 10
Maximum value: 400

Beats per bar

Set the amount of beats per bar to an appropriate value. The first count of every bar will sound different (see settings of the frequencies below). e.g. for a piece written in 3/4, set the beats per bar to 3.

Minimum value: 1
Maximum value: 8

Beep length

Set the beep length to a desired value. This may vary from computer to computer and depends on the microprocessor speed.

Minimum value: 1
Maximum value: 8

Beep first beat

The first beat of every bar will sound this frequency when the metronome is running and the sound is on. Test the sound using the **[TEST]** button.

Minimum value: 100
Maximum value: 5000

Beep other beats

Starting from the second beat up to the beat defined in 'beats per bar', the metronome will sound this frequency when the metronome is running and the sound is on. The sound can be tested using the **[TEST]** button.

Minimum value: 100

Maximum value: 5000

Visual metronome

When the metronome is running, this screen shows images changing every beat allowing the metronome to run without sound. The images are spacially separated and differ in color. Swith to the setup or tuner mode if this visual aid is not desired.

Instrument tuner

Three different tuner modes can be used:

Keyboard mode

Clicking the keys with the mouse will sound the corresponding tone. Octave settings are defined by pressing one of the buttons above the keyboard where **[C'-B']** is the lowest octave and **[c''-b'']** is the highest octave preprogrammed. All frquencies are base on *a* = 440 Hz. For a list, see Appendix B

Frequency mode

Adjust the frequency in the window by pressing the **[up]** or **[down]** arrows or by typing in the desired sound frequency (in Hz). Pressing the **[frequency]** button will generate the tone.

Minimum value: 100
Maximum value: 5000

Guitar mode

Clicking on one of the six strings will sound the corresponging tone. This can be used for quick guitar tuning. Frequencies are based on *a* = 440 Hz.

Appendix A: tempo designations table

Tempo	beats per minute	meaning
largo	40-60	very slow
larghetto	60-66	slower
adagio	66-76	slow
andante	76-108	medium tempo
moderato	108-120	moderate
allegro	120-166	moderately fast
presto	168-200	fast
prestissimo	200-208	very fast

note: these are approximate values.

Appendix B: note frequencies (Hz)

Note	C'-B'	C-B	c-b	c'-b'	c''-b''
C	65.41	130.81	261.63	523.26	1046.52
C# or Db	69.29	138.59	277.18	554.36	1108.72
D	73.41	146.83	293.66	587.32	1174.64
D# or Eb	77.78	155.56	311.13	622.26	1244.52
E	82.41	164.81	329.63	659.26	1318.52
F	89.81	179.61	359.23	718.46	1436.92
F# or Gb	92.49	184.99	369.99	739.98	1479.96
G	98.00	196.00	392.00	784.00	1568.00
G# or Ab	103.82	207.65	415.30	830.60	1661.20
A	110.00	220.00	**440.00**	880.00	1760.00
A# or Bb	116.54	233.08	466.16	932.32	1864.64
B	123.47	264.94	493.88	987.76	1975.52

note: these frequencies are based on *a* = 440 Hz.