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Automatic Guitar Tuner - Abstract

This project goal is to solve guitar players' difficulty of tuning the guitar strings.

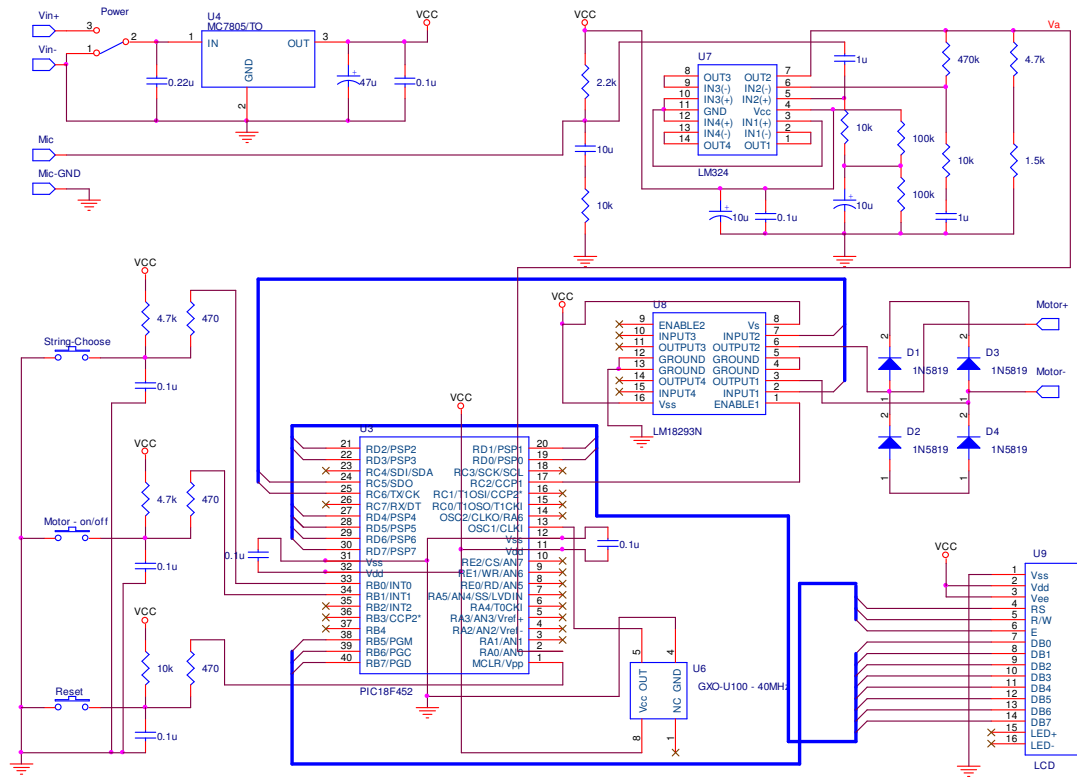
Right before starting to play, it's essential to tune the guitar string to well known frequencies, shown in the next table.

String #	Guitar Octaves	Frequency [Hz]
1	E2	82.41
2	A2	110
3	D3	146.83
4	G3	196
5	B3	246.94
6	E4	329.63

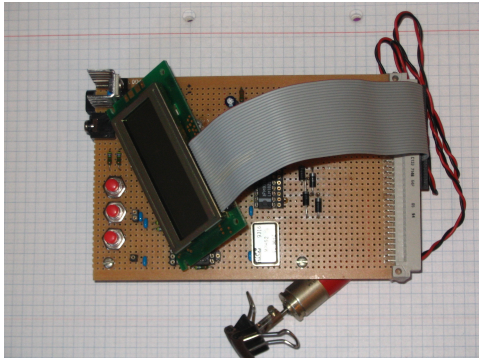
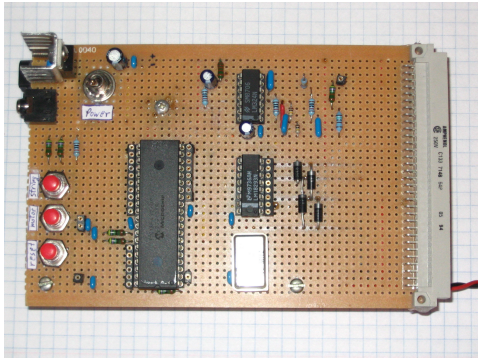
These days, you can find two main instruments for guitar tuning:

1. Tuning whistle - enables tuning the guitar strings by making the same sound of each string – demands good musical sense of the player.
2. Guitar Tuner – an instrument that shows the frequency of each string you play. This way you can tune the string till you achieve the right frequency.

This project deals with tuning the guitar strings by itself, using DC-Motor attached to string while tuning. The player should only pick the string to tune and attach the motor to its key.



System schematic



Automatic Tuner pictures