

## Genome Music by Todd Barton

### *The DNA Code: Music, Rhythm and Harmony of Life*

DNA is a linear code, a language or sequential recipe that defines a living thing. In much the same way written music is a language which can be interpreted sequentially as a recipe to produce melody, harmony and/or rhythm.

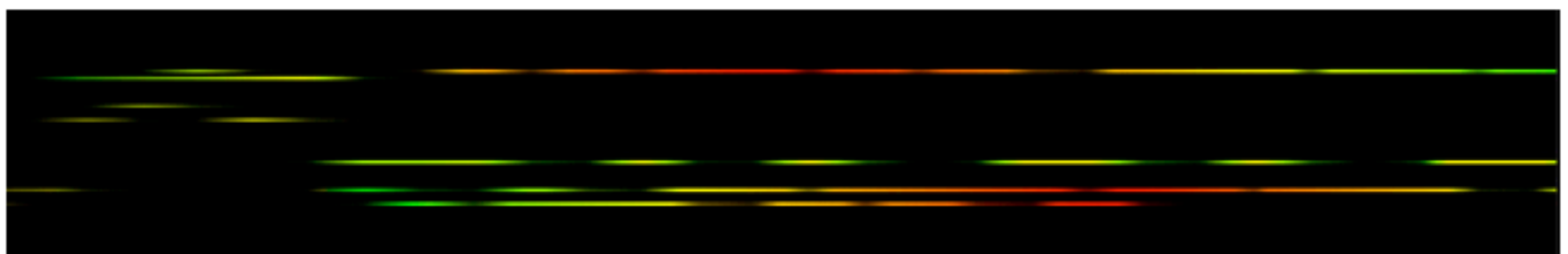
DNA written code lives in the domain of space. Music “code” lives in the domain of time.

DNA consists of four Bases - Adenine, Thymine, Cytosine and Guanine – abbreviated as A, T, C, and G. By assigning a different musical pitch to each Base, a unique melody arises. Repeated letters, such as CAA or GGG, can be interpreted as either sustained notes in melodic terms or as rests in rhythmic terms.

To produce Genome music, I first type a DNA sequence into a computer music program that allows me to see the pattern of melody and rhythm on the computer screen as a series of dashes.



I then take a picture of that pattern and import it into my music program as a graphic image. I next extend or draw out the individual notes or dashes, essentially blurring them into harmonies or chord progressions.



It is my intent to avoid changing the pitches or rhythms of the DNA sequence, but rather to let them speak or sing for themselves. I apply minimal musical transformations, raising or lowering the overall pitch by an octave, perhaps speeding up or slowing down the tempo by a factor of two. I also orchestrate, assigning different instruments or sounds to the sequence, which may yield a variety of musical timbres or textures, essentially variations on the same DNA sequence theme. Thus, the variety you hear in Genome music comes from blending rhythmic, melodic, harmonic and timbral elements, all derived from the same string of genetic code.

For information and audio samples go to: [www.toddbarton.com](http://www.toddbarton.com)  
Click on Music then click on Genome