tritone

"An augmented fourth, containing three whole tones. The use of the **tritone** was anciently forbidden in harmony or counterpoint, as it was regarded in the light of what is called a false relation. It was not permitted to be employed in the upper note of one chord and the lower note of the following. In each case it was called mi contra fa, the leading or sensitive note being known as mi, and according to the old rules, mi contra fa diabolus est." [Stainer, John; Barrett, W.A.; A Dictionary of Musical Terms; Novello, Ewer and Co., London, pre-1900]

In music theory, the **tritone** is defined as a musical interval composed of three adjacent whole tones. For instance, the interval from F up to the B above it (in short, F–B) is a **tritone** as it can be decomposed into the three adjacent whole tones F–G, G–A, and A–B. According to this definition, within a diatonic scale there is only one **tritone** for each octave. For instance, the above-mentioned interval F–B is the only tritone formed from the notes of the C major scale. A **tritone** is also commonly defined as an interval spanning six semitones. According to this definition, a diatonic scale contains two **tritones** for each octave. For instance, the above-mentioned C major scale contains the **tritones** F–B (from F to the B above it, also called augmented fourth) and B–F (from B to the F above it, also called diminished fifth, semidiapente, or semitritonus). In twelve-equal temperament, the **tritone** divides the octave exactly in half.

In classical music, the **tritone** is a harmonic and melodic dissonance and is important in the study of musical harmony. The **tritone** can be used to avoid traditional tonality: "Any tendency for a tonality to emerge may be avoided by introducing a note three whole tones distant from the keynote of that tonality." Contrarily, the **tritone** found in the dominant seventh chord helps establish the tonality of a composition. These contrasting uses exhibit the flexibility, ubiquity, and distinctness of the **tritone** in music.

The condition of having **tritones** is called tritonia; that of having no tritones is atritonia. A musical scale or chord containing **tritones** is called tritonic; one without tritones is atritonic. Wikipedia, Tritone

---

The **tritone** represents a trinity within its own geometrically derived makeups because it functions as a neutral, harmonic extention of the major sonority - 4:5:6:7:8, it ascends toward the octave as 3 - b7, or 7:5, and it descends as 5:7. The 10:7 harmonic ratio encloses the octave - 8, therefore, it can be perceived as either ascending or descending. The ambiguity of the **tritone** interval, coupled with its division of the octave into two separate sections, unifies consonance and dissonance, the endless octave divisions of the harmonic series, and the static harmony that the dominant sonority produces. The function of the dominant seventh|dominant seventh chord in the Blues is a great example of how the **tritone** interval acts as the unifying glue of harmony. The sacredness of the **tritone** is reflected in its transcendent permutations of itself. Depending upon the context in which it appears, it can appear as consonant, dissonant, and as a harmonic extension of its fundamental source; the fundamental frequency and its infinite octaves. [Marc Rossi]

"Basically if you choose C as fundamental C-C' is the first octave, being C' half (½) the wave(string) length and double the frequency.

The intervals in one octave are all integers between ½ and 1. The position of f#, the **tritone**, is therefore at ¾ of the wavelength of C. The remaining ¼ of C equals ½ of C' which is C''... or the octave above C'." [Maximilian Pfalzgraf]

"When red and green combine, the result is yellow. When fa and ci combine (F & B),
the result is sol (G). The 10:7 - 7:5 ratio.
(The **tritone** intervals) acoustically invoke the fundamental frequency." [Marc Rossi]

The **Tritone**

This is a very special interval, as it falls exactly in the middle of a 12-tone scale, dividing the octave in half. It is the most dissonant musical interval there is, with an extremely distinctive, jarring sound. (If you have an instrument nearby, try it — for example C to F# — it is a sound you are not likely to forget!)

Colour-wise, the equivalent to the tritone is the complementary of a colour. This is the most difficult interval to relate to its musical equivalent, as in music it is considered the most dissonant and in painting the most consonant. But perhaps these are merely two sides of the same coin. The complementary colour combination is the most striking; it jumps out at you. And the same can certainly be said for the harsh **Tritone**. The Tritone has been used effectively in many contemporary musical compositions — it contains a great amount of energy and dynamism. Alan Wells, who has written a number of papers on colour and music, noted that, 'chords built on tones at this interval of the tritone or half an octave, when played in succession, had a startling and contrasting, yet stimulating and pleasing, effect similar to the effect of complementary colours when placed side by side.'13

It is agreed among most colour theorists that a colour's complementary will seem to appear in any colour placed next to it. 14 Therefore, when two complementaries are placed next to each other, each one reinforces the other exponentially. In the real world, however, an exact complementary is extremely rare. For a complementary pair to be true, each colour must create the same coloured after-image as the colour it is said to be complementary to. To work out the exact complementary to a colour, one must look at a colour for one or two minutes and then look at a white wall. The colour one then sees projected on the white wall is the complementary to the first colour.15 There are so many hues and shades of colours that it is not a simple matter of just choosing, for example, Blue and Orange. It would have to be a very particular Orange that is the complement to a very particular Blue. When one does see two complementary colours next to each other, there is a jarring effect, rather like the Tritone. The reason that 'complementary' colours work so well in painting is, in my opinion, because they are not true complementaries. They are just slightly off, thus working in the same way as a Perfect 4th or 5th, but even more vibrant because they are so close to the Tritone." posted by [Marc Rossi] on FaceBook 6/24/18. Source unknown.