



# Tritonet

Harmony toolset  
for  
Ableton Live



# INDEX

Tritonet concept	7
Tritonet toolset for Ableton Live	9
Installation	10
How to use	11
Parameters	12
1. Master Module	12
2. MIDI Module	13
3. Resonator Module	13
Components of Tritonet	15
Series of Fifths and Table	16
Natural Scales and Night	17
Chords and Compass	18
Symmetrical Keyboard Layout	19
Chord algorithm	20
Dynamic Pitch Mapping	21
Textbook	23
Biography	24

Tritonet

Dorian

In Out

DEFGABC





# Tritonet concept

Tritonet is a musical abacus which provides an innovative way of learning and applying music harmony. It makes learning music theory much more accessible by focusing on building the intuition behind harmony.

Tritonet can be seen as an evolution of the Circle of Fifths into the 21st century, enabling a wide array of possibilities for utilising music theory both in the traditional sense and in terms of exploring new territories.

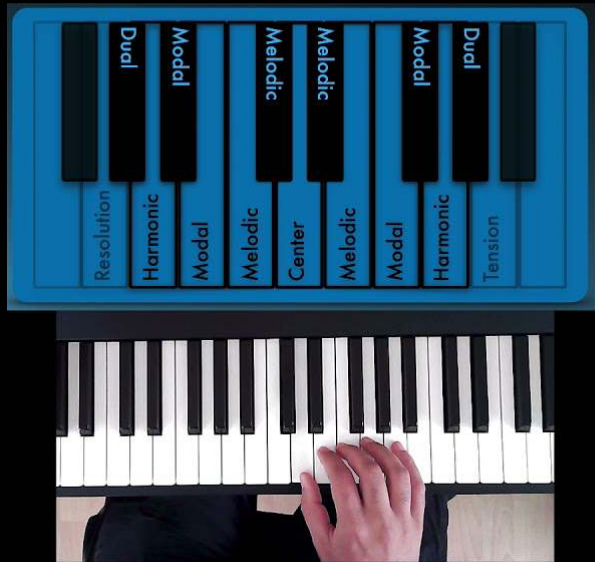
In modern times, the artistic side of music has been overshadowing the fundamentally quantitative and aesthetic free part of harmony -- and this is how it was seen in the Quadrivium<sup>1</sup>. Tritonet is attempting to resurrect this side of music, by bringing back the attention onto the ratios and symmetries which underpin music harmony.

Learning music harmony in medieval times took more than a decade. The Guidonian hand method, introduced in the 12th century as a visual helper, revolutionised theoretical education -- it allowed musicians to learn it in about two years. Tritonet, introduced a millennium later as an interactive visual helper, aims to dramatically shorten the duration of study required to internalise music harmony.

More details about this new approach can be found in the textbook "[The Tritonet Approach to Music Theory](#)" by Tolga Zafer.

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<sup>1</sup> The Quadrivium was the ancient liberal arts education, consisting of studying the four arts: arithmetic, geometry, astronomy and music.



[Click to watch](#)





# Installation

Unzip Tritonet Beta folder



Tritonet Beta.zip



Install the font, TRITONET.ttf

Double click on Tritonet.alp



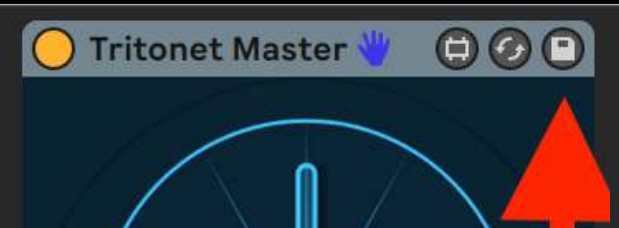
Tritonet.alp

Prompt the folder to be unpacked (Desktop is fine)



Play with the demo set

Save Tritonet Master to your user library



Save Tritonet MIDI to your user library

Save Tritonet Resonator to your user library



**Now you can use them on your own Live set.**

# How to use

Place Tritonet Master into a dedicated MIDI channel. You need only one instance per live set. To open the Tritonet Master, click inside the module window



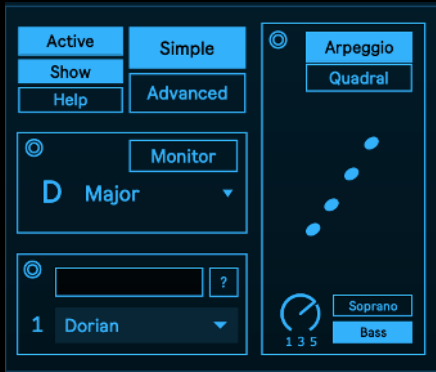
Place Tritonet MIDI module for any MIDI channel you want to control. Make sure to place it at the end of the MIDI chain, right before the instrument to ensure the scaling is effective after all MIDI modifications.

Place Tritonet Resonator into any audio channel that you want to tune. It adds resonance into the audio signal, especially useful to tune the percussions and drums.



# Parameters

## 1. Master Module



**Active** : Bypass the effect of Tritonet to the harmony.

**Show** : Hides or shows the notes on the Tritonet

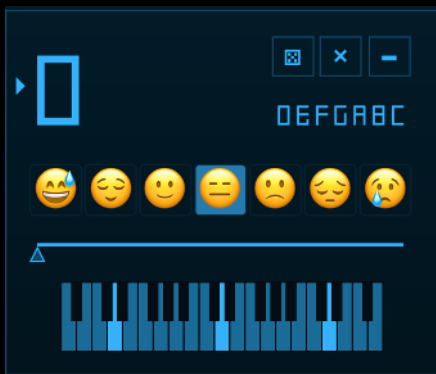
**Simple-Advanced** : Simple keeps all the notes in scale. Advanced splits the keyboard layout, white notes are in the scale, black keys are out.

**Help** : Opens a new window with extra information both about how to use Tritonet and the theory behind it.

**Input Module** : Allows you to identify the incoming tonality. It is useful if you have a preexisted project that you would like to apply Tritonet. Another case would be to import MIDI files from the internet, you can select incoming root note and the scale. If you activate the monitor, both incoming and outgoing tonalities are same which allows to analyze the original music harmonically.

**Search Module** : Allows you to search within the +300 scales in various ways. You can either write into the search box or search via the number of tritone pair. Another way is to play the scale and let Tritonet to find which scale it is by simply pushing the "?" Button.

**Chord Module** : This module allows users to create chords and send the information to the Tritonet MIDI modules. For more information go to the chorder.



**Center** : Allows you to change the root of the outgoing tonality.

**Moods** : Emojis represent the seven natural scales, which changes according to the placement of tritone interval.

**Travel slider** : You can find derivative scales who shares the same tritone pair.

**Negative (-)** : Inversion of the scale on the axis of Center note.

**Cross (x)** : Tritonet transposition of the scale.

**Chance (☰)** : Randomly choose a scale when it is activated. It turns back to the original tonality when it is off.

## 2. MIDI Module



MIDI module contains set of MIDI effects and Max patches and can be controlled via Macros  
Voices : Allows scaler to use different tonality schemes. 0 fixed, 1 Bass, 2 Tenor, 3 Alto and 4 Soprano.

Bass Soprano : Tritonet MIDI also has a chorder module inside, this Macro activates the chorder and allows user to switch in between the Bass and Soprano. The incoming MIDI signal is either the lowest or the highest note of the chord.

Chord Type : Users can change the type of chord is going to produced when it is active.

Pitch Length : Allows users to determine the duration of the MIDI notes. Far left bypasses.

Pitch Shift : Control from Pitch Module of Ableton. Transposition -36 to +36 semitones

Pitch Chance : Control from Random module of Ableton.

Pitch Range : Control from Random module of Ableton.

Dynamic : Control from Velocity module of

## 3. Resonator Module



Resonator Module contains a max patch and the Resonator module of Ableton

Octaves : Change the octave of the Root note

Travel : Allows user to travel inside the tonality.

Decay : Native decay parameter of Ableton Resonator

Dry/Wet : Native Dry/Wet parameter of Ableton Resonator

Frequency : Native Filter frequency parameter of Ableton Resonator

Filter Type : Native Filter type parameter of Ableton Resonator

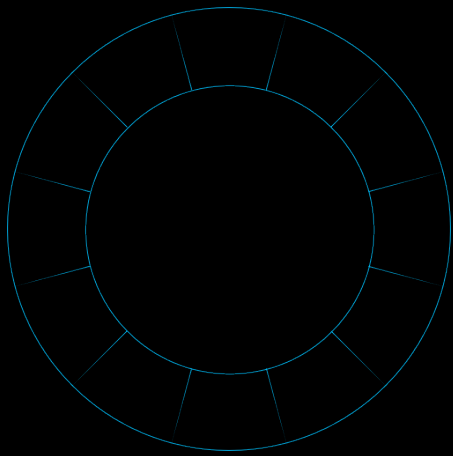
Color : Native Color parameter of Ableton Resonator

Global Gain: Native Gain parameter of



Left Resolves, Right Tightens

# Components of Tritonet



## Table

It is the Circle of Fifths. All 12 notes are placed in a circular fashion. This is the musical world that all the elements are placed in a circle

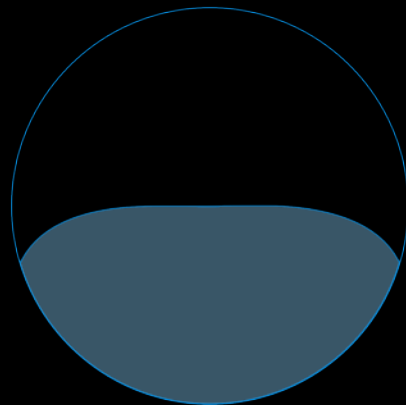
## Night

Scale indicator. Defines the position of triton thus the mode.

It is the Natural scales if there is only one.

It is the Compound scales if there are two.

It is the Crystal scales if there are none.



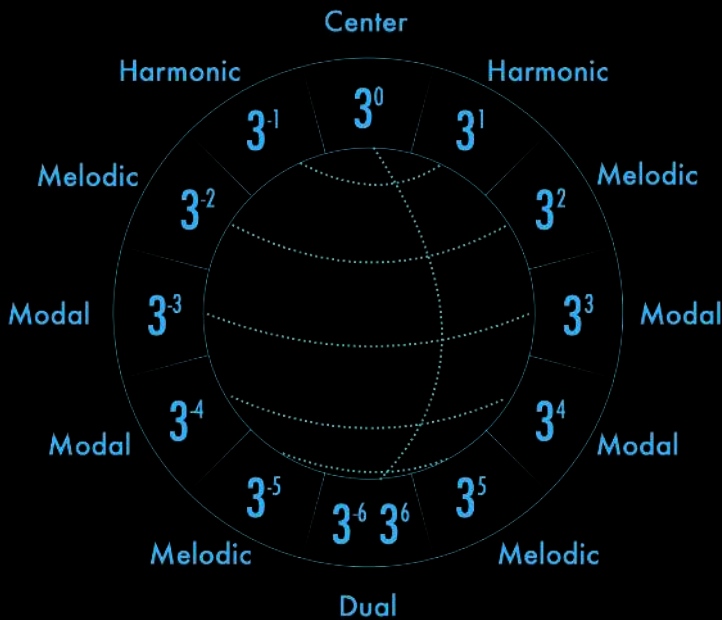
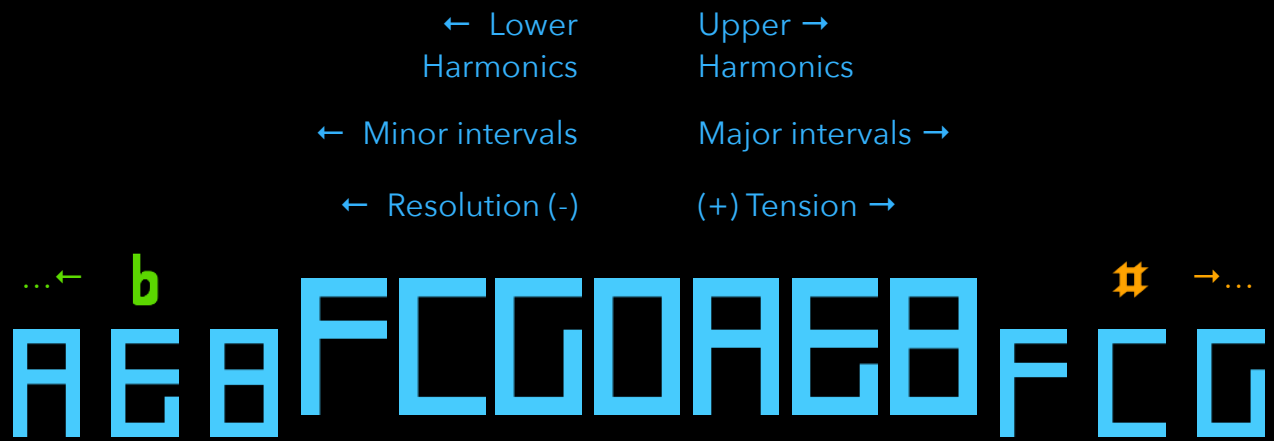
## Compass

Chord indicator. Shows the functions inside the harmony by following the lowest note of the chord.

# Series of Fifths and Table

Music alphabet consists of seven letters, corresponding seven natural tones. When these tones are placed with the minimal distance in between in terms of frequency, we reach to the “Melodic Scale”.

On the other hand, if the consecutive notes are at the range of a third harmonic, perfect fifth apart, we can reach to the “Series of Fifths” with symmetrical features on music:



When the Series of Fifths is placed in a circular fashion, we reach the Circle of Fifths.



# Natural Scales and Night

Natural modes consist of seven consecutive tones in the series of fifths. When one of these tones is emphasised more than the others, it reveals a mode with a distinct musical character. Since we have seven tones, we can have seven different possible centres, and thus seven different modes.

These modes date back to very early times; they are the 'Temple Modes' in the Ancient Middle East, 'Tonoí' in Ancient Greece, 'Dastgāh' in Persian music, 'Echos' in Byzantine Music, 'Gregorian modes' in Medieval Europe, and 'Jazz modes' in modern times. Today, they are still called by their Ancient Greek names, thanks to Renaissance.

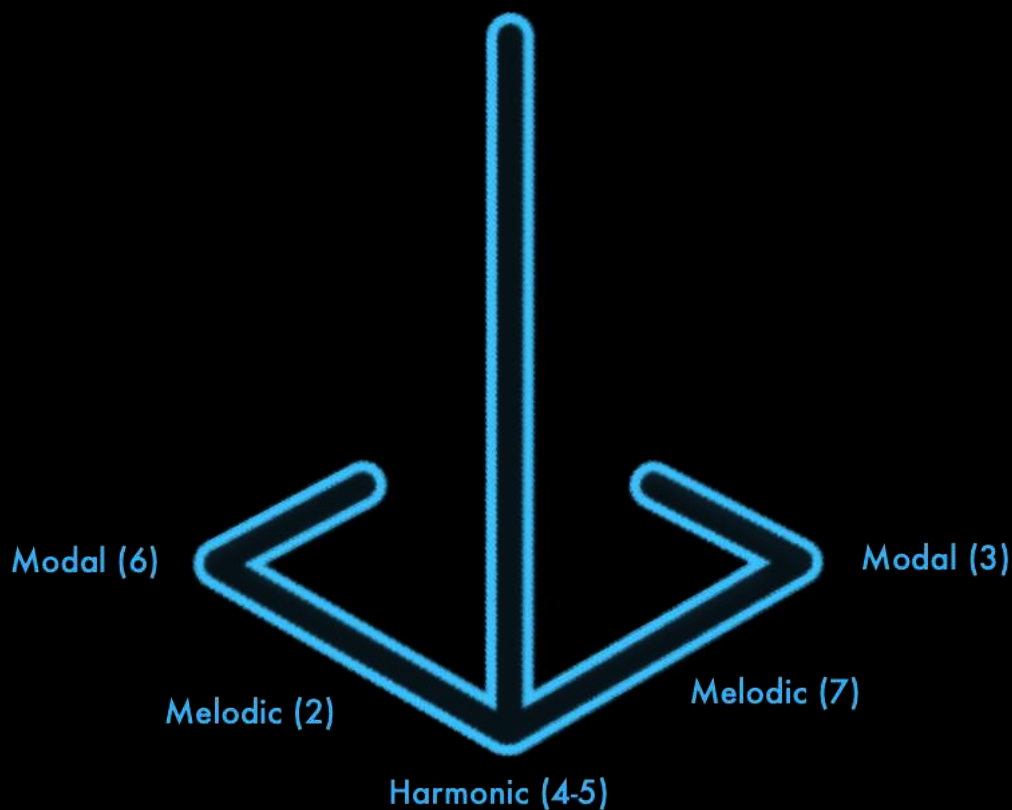


Imagine you are looking at the Earth from space taking the North Pole as the centre. The position of the Earth according to the Sun gives us an Illumination Circle which divides the Earth into night and day.

The edges of seven note group or the edges of nightline reveals the tritone interval (colour tones in jazz music) in between the Lydian and Locrian tone. When they are sounded, they identify the borders of the group, thus the mode.

# Chords and Compass

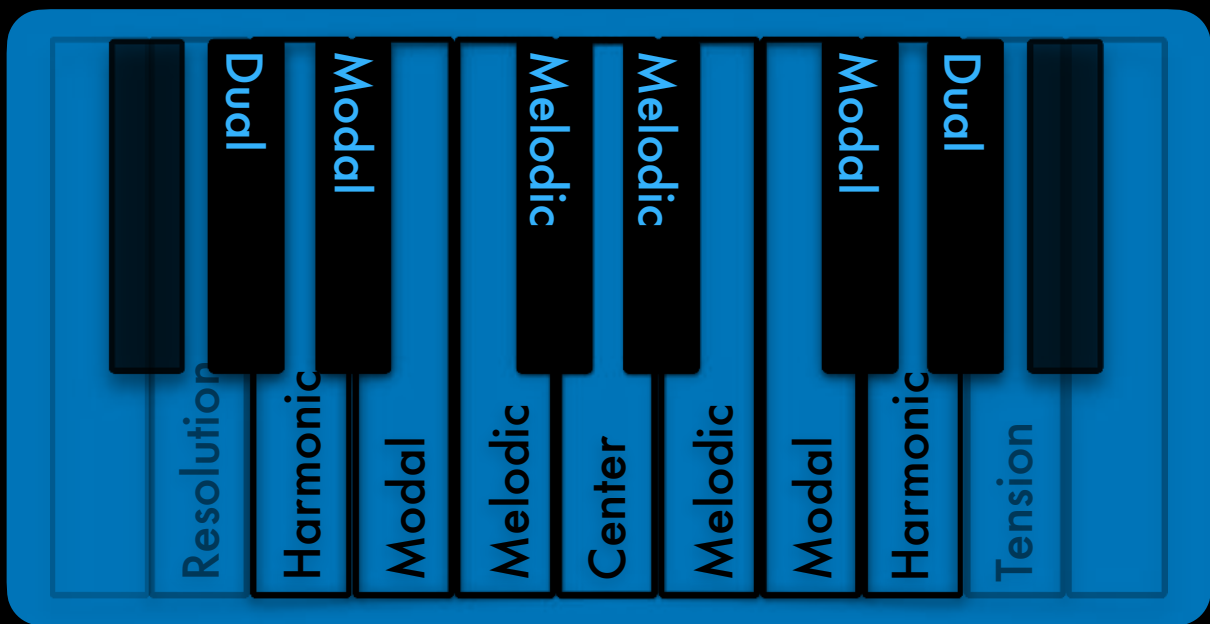
Compass shows the local position of the notes in the mode. The tip of the Compass indicates the lowest tone of the chord. Each interval is placed symmetrically on the bottom of the Compass.



Imagine you have a plane with engines on the wings. The notes you have chosen shows the tendency what the next move can be. Then it is up to you to follow the tendency or not.

# Symmetrical Keyboard Layout

On keyboard, D is the visual symmetrical central and all the intervals are placed symmetrically on a D axis.



In default mode, Tritonet lays out the notes of the scale based on D as the root note. So users can play by just considering the symmetry although they do have little keyboard playing experience.

Start your musical journey and you know you will reach the tonality center when you arrive the note D.

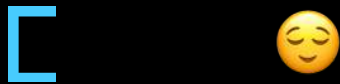
Scales who has less than 7 notes are rounded up on the white keys. Scales who has more than 7 notes also uses black keys, adding F#, C#, G#, D#, A# consecutively.

# Chord algorithm

Voice Leading involves designing the chord transitions so that there is the least possible amount of movement between tones connecting to each other.

For this example, we are going to use traditional SATB chord style with triadic root chords.

1. Choose a gravitational point for your music, the primary emotion.



2. Decide an itinerary by designing an emotional path.



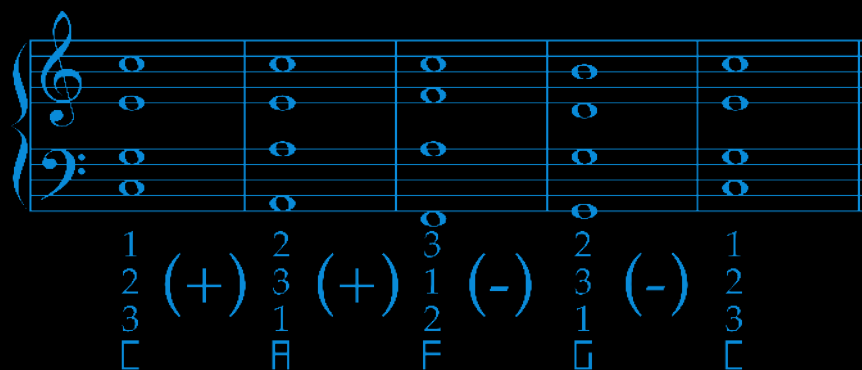
3. Build the chords for each member of the chord progression and number the notes.



4. Define a starting position for the first chord.



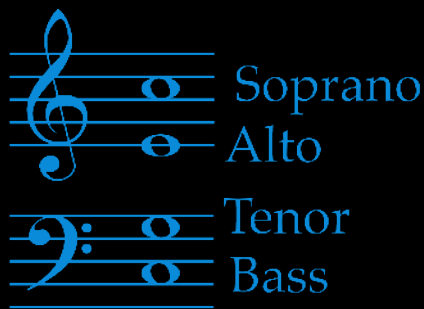
5. Use a chain of + - + - + -. Start the chain according to the direction the next chord is. Add or subtract 1 from the chord and find the position of the new chord.



# Dynamic Pitch Mapping

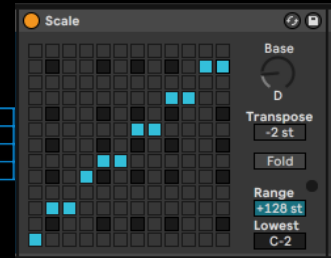
Each member of the chord resides in a specific function of the scale.

Temporary positions of each voice is sent to the scale objects in the tracks for every chord change.



Soprano  
Alto  
Tenor  
Bass

C Ionian



Scale

Base: D

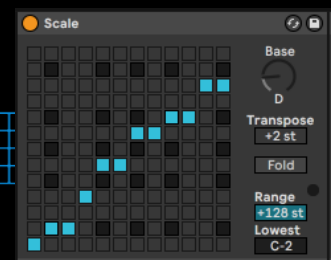

Transpose: -2 st

Fold

Range: +128 st

Lowest: C-2

E Phrygian



Scale

Base: D

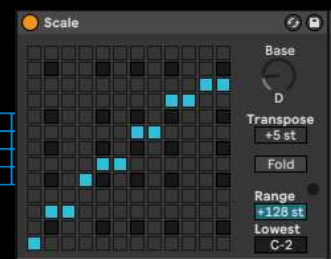
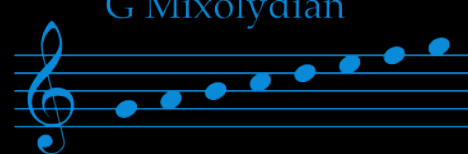
Transpose: +2 st

Fold

Range: +128 st

Lowest: C-2

G Mixolydian



Scale

Base: D

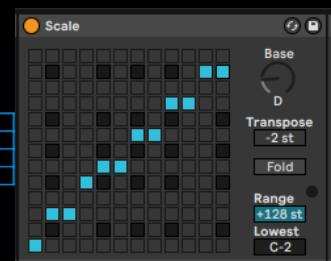
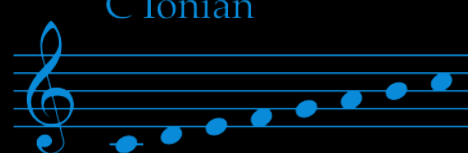
Transpose: +5 st

Fold

Range: +128 st

Lowest: C-2

C Ionian



Scale

Base: D

Transpose: -2 st

Fold

Range: +128 st

Lowest: C-2

You can learn more about from the Help button on Tritonet Master

Videos are going to uploaded soon on the Web Site

[www.tritonetcalculator.com](http://www.tritonetcalculator.com)

# Textbook



'Music' is the sum of vibrations created by an intelligence. 'Theory' is the evaluation of the bonds between these vibrations.

This book proposes a new theoretical model, Tritonet, that provides a unique approach to music theory by reintroducing the 'Circle of Fifths'. It offers additional components that turn the circle into a musical calculator, which can be used to construct musical structures visually.

Inspired by a three thousand year-old tablet, the book pays homage to past and present music, while looking towards the future with 'ResTens' (modular voice leading) and 'Cyclic Music' (tonality cycles).

# Biography



Tolga Zafer was born in 1975, Ankara / Turkey.

Studied piano and composition with Faris Akarsu, Ilhan Usmanbas, Fernando Benadon and Kamran Ince.

Completed his Master on Music Composition at MIAM/Turkey, his DMA UofMemphis/USA

Taught in University level at both UofMemphis, Akdeniz University and Bilgi University for 15 years.

Composed music for symphonic, ethnic instruments and synthesisers.

His music has been played in six continents.

Arranged music for multiple international ensembles.

Performed classical, contemporary, jazz, ethnic world, rock, funk, pop and electronic music.

Invented the musical calculator, Tritonet, both for pedagogical and performance purposes.

Continues his research on Music theory and Algorithmic composition techniques.

[Web Site](#)