One-day workshop on Hayward Tuning Vine on Saturday 10<sup>th</sup> April 2016 at KuLe Theater, Auguststr. 10, 10117 Berlin

# Hayward Tuning Vine



www.tuningvine.com

Microtonal tuba player Robin Hayward gives one-day introductory workshop on the recently developed Tuning Vine interface for Just Intonation.

Just Intonation is the system of microtonal tuning based on whole number frequency relationships, and is the acoustic basis underlying such musical intervals as the perfect fifth and major third, as well as less common microtonal intervals such as the septimal minor seventh and neutral sixth. Through colour-coding and spatialising the harmonic relationships, the Hayward Tuning Vine allows them to be explored intuitively, enabling them to be seen as well as heard. It therefore makes Just Intonation more accessible to people who might otherwise be put off by its apparently abstract and mathematical nature, and provides an ideal introduction to the theory and practice of microtonal music.

# Minimum qualifications

Some basic knowledge of music theory would be advisable, and either some competence on a sustaining pitch instrument or a willingness to use the voice to tune intervals. By far the most important factor though is a strong desire to learn about microtonality and willingness to try stuff out together with the other participants.

## What to bring

- · instrument or voice
- headphones
- laptop computer with free copy of Hayward Tuning Vine software downloaded from www.tuningvine.com after registering and receiving the licencing email

## Participation fee

75€, which includes a free copy of the Hayward Tuning Vine software. Upon registering participants will receive an email containing a licence to download the full version of the software.

#### Registration

Please preregister by sending an email to hayward@tuningvine.com. Any questions concerning the workshop should also be sent to this email address. The maximum number of participants is 12, and the minimum number 6.

# Workshop details\*

# Session 1, 11:00 - 14:00

The Tuning Vine as an introduction to Just Intonation.

- demonstration of connection between ratios and musical intervals for prime numbers 2, 3 and 5
- significance of prime numbers for Just Intonation
- notation cards: colour notation, ratios, cents
- 'Flowers' versus 'Grapes' view
- · number boxes and transpositions
- MONO / POLY modes
- Options, Master Volume and parameter controls
- working up through prime numbers 7 to 23
- · undertone row as mirror image of overtone row

# Session 2, 15:00 - 18:00

The Tuning Vine as a practical aid to tuning in Just Intonation.

- tuning 'Pythogorean' intervals: octaves, fifths and fourths
- tuning 'Ptolemaic' intervals: major and minor thirds and sixths
- significance of octave positioning for tuning intervals
- locating common overtones on the Vine when tuning intervals
- challenge of playing Just Intonation on acoustic instruments
- · tuning septimal 'blues' intervals
- tuning 'prime-limit 7' chords based on prime numbers 2, 3, 5 and 7

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#### Language / Sprache

This workshop will take place in English. In case you are interested in attending a workshop in German, please contact havward@tuningvine.com.

Dieser Workshop findet auf Englisch statt. Falls Sie Interesse haben, an einem deutschsprachigen Workshop teilzunehmen, bitte schreiben Sie eine Email an hayward@tuningvine.com.

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Robin Hayward is a tuba player and composer. He has introduced revolutionary playing techniques to brass instruments, initially through the discovery of the 'noise-valve', and later through the development of the first fully microtonal tuba in 2009. In 2012 he invented the Hayward Tuning Vine, partly out of a desire to visualise the harmonic space implicit within the microtonal tuba. His approach to the tuba has been documented in the solo CDs Valve Division, States of Rushing and Nouveau Saxhorn Nouveau Basse, along with various collaborative releases. He has collaborated with musicians such as Charles Curtis and Roberto Fabbriciani, along with composers such as Alvin Lucier and Eliane Radigue. In 2005 he founded the ensemble Zinc & Copper in order to explore brass chamber music from an experimental music perspective. www.robinhayward.de

<sup>\*</sup> This plan is meant as a guide only and the actual workshop may deviate from it to some extent.