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XENHARMONIC BULLETINS

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During the last two decades, interest in the use of intervals smaller than the conventional semitone or half-step, 1/12 octave, has grown. While theorists have written about this for a long time, there was no really convenient way of realizing new tunings in actual sound until the advent of electronic musical instruments, software for computers, and new recording media such as the cassette that can be readily copied to bring these new sounds into your apartment or home--or even played in a car or while walking!

Conventional musical instruments were not designed for any progress beyond the 19th century so despite the continued writing of new theoretical works, they only produced frustrated dreaming till the early 1960s, when some of us got together, compared notes, built and modified instruments, and became a Network of People without needing formal incorporation or legalistic folderol--recently this network has become known as the XENHARMONIC MUSIC ALLIANCE.

While scholarly journals do exist which publish information about non-twelve-tone scales and just intonation and alternative tunings, most writings remain theoretical and address themselves to some kind of hazy future, rather than helping composers living today to get heard by today's listeners.

Ivor Darreg's Xenharmonic Bulletins were started to fill this need--what CAN BE DONE right now, HOW TO DO it, and news concerning others in the field. Many cassettes of new music by Darreg are now available--reading about it is NOT ENOUGH!

No. 1. March 1966.
Definition of Xenharmonics. Change in attitudes at that time; hence reasons for starting the Bulletin. Electronic instruments and computer music ---new possibilities thereby.

No. 2. May 1974.
Further progress summarized. Second-order or Tempered Temperaments; widespread use of systems which deviate from theoretical equal tempering. Tables: Harmonic Series, and Intervals of importance to the Theory.

No. 3. November 1974.
Updating as of 1974. Review of Harry Partch's GENESIS OF A MUSIC, SECOND ENLARGED EDITION. Appraisal of the 24-tone (quartertone) system. Instruments for quartertone music.

No. 4. February 1975.
Darreg's wall-charts of Comparisons of Just Intonation with various equal and unequal temperaments, described. Overtones and Harmonics. "Illegal" Sharps and Flats: Microtonal Deviations (bending also) in actual performance but not written down.
Review of George Whitman's INTRODUCTION TO MICROTONAL MUSIC (along lines of the Hába System). Review: UCLA Concert of Harry Partch's THE BEWITCHED. Sheet music of 22- and 19-tone was supplied with some copies at that time.

No. 5. May 1975. Key Issue.
NEW MOODS. Article on the emotional effects and uses peculiar to many of the non-12 tuning-systems, and the new CONTRAST this creates: an important reason for leaving the 12-tone equal temperament. Descriptions of the first Megalyra Family Instruments designed by Darreg: expansions of the steel-guitar idea including the Contrabass Register. They bear just intonation fret-lines as well as 12-tone lines compatible with ordinary music.

No. 6. September 1975.

The Notation Question: As of 1975, Some of the many ways of writing down non-twelve-tone compositions. Nomenclature problems: What to call the new pitches--shall they be merely numbered? [If future circumstances permit, new supplementary notation and nomenclature information will be included in a revised enlarged edition of No. 6]

No. 7. April 1976.

FRETTING AND FRET-CHARTS: How to fret or re-fret guitars etc. to new scales; How to make charts for steel guitars and other fretless instruments. Six FRETTING TABLES for the popular 650 mm or 25-5/8" active string-length for the following non-12 equal temperaments: 17, 19, 22, 24, 31, and 34 tones per octave. Of course 24 includes 12, so the comparison of 12 vs. non-12 is implicit in these tables.
Description of the Hobnailed Newel Post, a new instrument with just intonation fret-lines, strung with many strings on all four sides of a wooden beam.

No. 8. July 1976.

Recap of items in previous issues. 479 001 600 or Factorial 12--the theoretical number of twelve-tone rows as used by Serialists and Atonalists. Serial 12 tone compositions sound very much like one another, despite the theoretical enormous number of those 12-tone rows. Atonality can progress very far indeed if and only if it leaves the straitjacket of 12 and uses other tunings!

HOW TO TUNE NEW SCALES AS WELL AS ORTHODOX TWELVE. Routines for 17- and 19-tone equal. How pianos and organs are done in 12.

FREQUENCY AND BEAT TABLES FOR 17-, 19-, 22-, and 24-TONE EQUAL TEMPERAMENTS. Pitches for nine octaves and a major third; beats per second of the important tempered intervals in the registers suitable for checking their accuracy.

No. 9. October 1978.
Key Issue.

BUSONI HAD A DREAM. Right after the turn of the century, Busoni proposed the third-tone and the sixth-tone, the 18- and 36-tone equal temperaments principally to promote the use of 1/3 step as a melodic interval. Although he did not live long enough to finish his experiments, he did start. His suggestions for notation are given.
THE CALMER MOOD: 31 TONES PER OCTAVE: Comparison of 31-tone and ¼-comma meantone, which are extremely close to each other. Identical for practical purposes in any musical performance. Huygens discovered 31 and Prof. Fokker revived it; other investigators and instrument-builders.
More new instruments. INTERVAL Magazine. 34-tone. 53-tone. 10-tone. String-Length and Frequency Tables for 17, 18, 31, 34, 36, and ¼-comma meantone systems.

No. 10. December 1981.

Progress and Innovators, 1976-81.
DETAILED COMPARISON AMONG THE USABLE TUNING-SYSTEMS. Important systems are given the PRO vs. CON treatment, Advantages and Disadvantages in Parallel columns. Just Intonation.

No. 11. April 1989.

ELECTRONIC INSTRUMENTS FOR NEW SCALES. Recent progress. How they work.
GROUP OF SYSTEMS: 41, 43, & 46. Their Properties. Tables for them and for Partch's 43-UNequal.
METAL TUBES AND BARS: How to make and tune them. Suitability for many new scales. Their durability.
PARTCH'S PITCHES: Why did Harry Partch choose G = 392 Hz as his 1/1 starting point, when 392 Hz is the 12-tone equal-tempered pitch for the standard A = 440 Hz? It makes more sense than some persons might think.

No. 12 is planned for End of 1989.
It may contain: Comparison of the group of systems 48, 50, 53, and 55; 53 and Just Intonation; How much mistuning can be tolerated in practice; Timbre's influence on Harmony; Why you need more than 12 keys per octave on your new keyboards.