

100

For Quarantine Session #100
August 7, 2022

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'100' is an Improvisational Constraint for celebrating centennials or any other event related to the number 100. Intended for any line-up of musical instruments, musicians may or may not follow the constraints, keeping in mind that they have to honor the number 100 by any means throughout the performance.

Tuning

All instruments are tuned to just intonation with a base-frequency of 100 Hz. Table 1 lists the pitch class roots, respectively the exact frequencies of the first octave, adding two sub-frequencies for a rich lower end. For higher octaves, the pitch class roots are multiplied by positive integer numbers.

Table 1: Pitch Classes for 100, including the two sub-frequencies.

STEP	FORMULA	DECIMAL	PITCH [Hz]
-2	$2^{-24/12}$	0.25	25.0
-1	$2^{-12/12}$	0.5	50.0
0	$2^{0/12}$	1.0	100.0
1	$2^{1/12}$	1.0594630943592953	105.94630943592954
2	$2^{2/12}$	1.122462048309373	112.2462048309373
3	$2^{3/12}$	1.189207115002721	118.9207115002721
4	$2^{4/12}$	1.2599210498948732	125.99210498948732
5	$2^{5/12}$	1.3348398541700344	133.48398541700342
6	$2^{6/12}$	1.4142135623730951	141.4213562373095
7	$2^{7/12}$	1.4983070768766815	149.83070768766817
8	$2^{8/12}$	1.5874010519681994	158.74010519681994
9	$2^{9/12}$	1.681792830507429	168.1792830507429
10	$2^{10/12}$	1.7817974362806785	178.17974362806785
11	$2^{11/12}$	1.8877486253633868	188.77486253633867
12	$2^{12/12}$	2.0	200.0

Tempo

The basic tempo of 100 is 100 BPM, allowing integer multiples (200,400,...) and divisions (50,25,...) of this basic tempo and their combinations (150,425,...).