



Change of Frequency used for JCSS Calibration of Sound Level Meter and Measurement Microphone

We would like to inform you that, starting from October 1, 2023, RION will conduct JCSS calibration using exact frequencies. We are still able to perform JCSS calibration with nominal frequencies. If you prefer JCSS calibration with nominal frequencies, please do not hesitate to let us know.

About “Nominal Frequencies” and “Exact Frequencies”:

RION has historically conducted JCSS calibration using nominal frequencies, as indicated in the table below. The frequency range is based on 1/3 Octave center frequencies, spanning from 20 Hz to 12500 Hz for Sound Level Meters and 20 Hz to 20000 Hz for Measurement Microphones. With nominal frequencies, easily manageable values such as 20 Hz and 25 Hz are used to represent 1/3 Octave center frequencies. On the other hand, exact frequencies, such as 19.953 Hz and 25.119 Hz, are used to express 1/3 Octave center frequencies.

Nominal Frequencies are used for expressing rounded numbers for 1/3 octave center frequencies, whereas exact Frequencies are used for precise numbers.

Nominal Frequency[Hz]	20 ,	25 ,	31.5 ,	40 ,	50 ,	63 ,	80 ,			
(1/3 Octave Band)	100 ,	125 ,	160 ,	200 ,	250 ,	315 ,	400 ,	500 ,	630 ,	800 ,
	1000 ,	1250 ,	1600 ,	2000 ,	2500 ,	3150 ,	4000 ,	5000 ,	6300 ,	8000 ,
	10000 ,	12500 ,	16000 ,	20000						

Specified Frequency [Hz]	19.953 ,	25.119 ,	31.623 ,	39.811 ,	50.119 ,	63.096 ,	79.433 ,			
(1/3 Octave Band)	100.00 ,	125.89 ,	158.49 ,	199.53 ,	251.19 ,	316.23 ,	398.11 ,	501.19 ,	630.96 ,	794.33 ,
	1000.0 ,	1258.9 ,	1584.9 ,	1995.3 ,	2511.9 ,	3162.3 ,	3981.1 ,	5011.9 ,	6309.6 ,	7943.3 ,
	10000 ,	12589 ,	15849 ,	19953						

Background why RION is transitioning to conduct JCSS calibration with exact frequencies:

The specifications of Sound Level Meters are regulated by the laws and standards of various countries.

In Japan, exact frequencies are specified in JIS C 1509-1 [Electroacoustics - Sound level meters - Part 1: Specifications].

The inspection rules for special measuring instruments were revised in 2015, which also specify the use of exact frequencies.

RION has consistently updated and augmented the implementation of JCSS calibration in accordance with changes in the laws and standards of Japan and other countries. We remain committed to delivering services that align with the expectations of our valued customers.