Typical Noise Levels Generated by Musical Instruments

Below are representative noise levels generated by musical instruments. These figures should only be used as a guide – actual readings will depend on variables such as location of recording equipment and the physical properties of the environment.

Table 1: Representative noise levels from single musicians in an orchestra. Sound levels recorded at 3 m except where indicated in the comment column.

Noise source	Comment	Noise level (dB)	Peak level (dB)
Violin/ viola		80-90	104
Violin/ viola	Near left ear	85-105	116
Cello		80-104	112
Acoustic bass		70-94	98
Clarinet		68-82	112
Oboe		74-102	116
Saxophone		75-110	113
Flute		92-105	109
Flute	Near right ear	98-114	118
Piccolo		96-112	120
Piccolo	Near right ear	102-118	126
French horn		92-104	107
Trombone		90-106	109
Trumpet		88-108	113
Harp		90	111
Timpani and bass drum		74-94	106
Percussion (high-hat)	Near left ear	68-94	125
Percussion		90-105	123-134
Singer		70-85	94
Soprano		105-110	118
Piano (normal practice)		60-90	105
Piano (loud)		70-105	110
Keyboards (electric)		60-110	118

Table 2: Representative noise levels experienced by tutors during individual lessons in a music college.

Noise source	Comment	Noise level (dB)	Peak level (dB)
Violin (with piano)	Small practice room	82	
Violin (with piano)	Large practice room	76	
Violin		84	
Flute		89	
Electric guitar		88	
Saxophone		95	
Trombone		90	
Piano		82	
Singer (with piano)		85	

From: *Sound advice: Control of noise at work in music and entertainment (HSG260), HSE 2008*