

R.M.S. Power/unit area		dB SPL	Pressure units conversion		
10 MW/m ²	1 kW/cm ²	195	100 kPa	1 bar	1 atmosphere
		190			
		185	32 kPa		
1 MW/m ²	100 W/cm ²	180	20.4 kPa		
		175	10 kPa	100 mbar	
100 kW/m ²	10 W/cm ²	170	1 lb/in ² r.m.s.		
		165	3.2 kPa	32 mbar	
10 kW/m ²	1 W/cm ²	160	2.04 kPa		
		155	1 kPa	10 mbar	
1 kW/m ²	100 mW/cm ²	150			
		145	320 Pa		
100 W/m ²	10 mW/cm ²	140	204 Pa		
		135	100 Pa	1 mbar	
10 W/m ²	1 mW/cm ²	130			
		125	32 Pa		
1 W/m ²	100 μW/cm ²	120	20.4 Pa	204 ubar	
		115	10 Pa	100 ubar	
100 mW/m ²	10 μW/cm ²	110		1 W/1 m free-field SPL of a 100% efficient source.	
		105	3.2 Pa		
10 mW/m ²	1 μW/cm ²	100	2 Pa		
		95	1 pascal	10 ubar	10 dynes/cm ²
1 mW/m ²	100 nW/cm ²	90			
		85	320 mPa		
100 μW/m ²	10 nW/cm ²	80	204 mPa		
		75	100 mPa	1 ubar	1 dyne/cm ²
10 μW/m ²	1 nW/cm ²	70			
		65	32 mPa		
1 μW/m ²	100 pW/cm ²	60	20.4 mPa		
		55	10 mPa	100 mbar	
100 nW/m ²	10 pW/cm ²	50			
		45	3.2 mPa		
10 nW/m ²	1 pW/cm ²	40	2.04 mPa		
		35	1 mPa	10 mbar	
1 nW/m ²	100 fW/cm ²	30			
		25	320 μPa		
100 pW/m ²	10 fW/cm ²	20	204 uPa		
		15	100 μPa		
10 pW/m ²	1 fW/cm ²	10			
		5	32 μPa		
1 pW/m ²	100 aW/cm ²	0	0 dB SPL — 20.4 μPa — .0002 ubar — .0002 dyne/cm ²		

Note: the definition of 0 dB SPL is the pressure measured at a point on the surface of a square meter which is uniformly irradiated at a power level of 10^{-12} acoustic watts. The free-field pressure reading is a sample reading taken by a pickup at a specified distance from a sound source, where both the source and pickup are of negligible size with respect to the wavelengths of sound being measured.