

# Peak dB SPL of Various Firearms (5 Studies)

(Compiled by James E. Lankford, 3/18/14)

## RIFLES

dB SPL<sub>pk</sub>

Winchester Model 70 (w/BOSS)	7mm Magnum	166.5
∞Remington Model 742	.30-06	163.6
^ Savage Model 110 (22" barrel)	.30-06	163
Remington 742 carbine (18" barrel)	.30-06	162.6
∞ Steyer-Daimler Mannlicher	.270	161.9
Remington 742 std (22" barrel)	.30-06	161.6
∞Browning X-Bolt	.30-06	161.4
∞Rossi Trifecta	.243	160.6
∞Winchester 94	.30-30	160.5
Ruger Model 1	.45-70	160.1
Thompson/Center Encore	.50 (black powder)	159.7
∞Winchester 70 XTR	7mm Mauser	159.2
M14	7.62 X 51mm (.308)	159.0
Colt AR-15	5.56 X 45mm (.223)	158.9
Auto-Ordinance Tommy Gun (w/comp)	.45 ACP	151.0
∞Marlin 917 VS	.17 HMR	147.1
∞Rossi Trifecta	.22LR	143.8
∞Ruger 10/22	.22LR	143.4
∞Mossberg 702	.22LR	143.0
^ Marlin Model 60	.22LR	141
∞Remington 514	.22LR	139.6

**PISTOLS**

		<b>dB SPL<sub>pk</sub></b>
*Smith & Wesson 586	.357	169
∞Ruger GP 100	.357	168.8
∞Colt Anaconda	.44	165.7
ΨItalian starter pistol 314	.22 blank	165.3
∞Ruger GP 100	.38	164.7
^ Smith & Wesson 686(.357)	.38	164
^ Glock 17	9mm	163
*Sig Sauer P228	9mm	160
∞Colt Anaconda	.44	159.2
*Colt 1911-1A	.45 ACP	159
*Glock 22	.40	159
ΨSmith & Wesson K-22	.22LR	158.1
	.22 short	155.1
	.22 blank	147.8
∞Smith & Wesson LR CTG	.22LR	157.9
∞Ruger MK	.22LR	157.5
Ruger Bearcat (4" barrel)	.22LR	154.0

## SHOTGUNS

		dB SPL <sub>pk</sub>
∞Remington 11-87 turkey	12 ga. (3" ammo) w/choke	161.5
Remington SP-10 magnum	10 ga. (3.5" ammo)	161.4
∞Remington 11-87 turkey	12 ga. (3" ammo) w/o choke	161.0
^ Beretta Gold Match AL391	12 ga. (hunting ammo)	161
	12 ga. (target)	159
Remington 11-78 slug	12 ga. (3" ammo)	160.1
∞Remington 870	12 ga. (2.75" ammo)	159.7
∞Rossi Trifecta	20 ga. (2.75" ammo)	159.1
∞New England SBI	.410 (3" ammo)	157.5
Remington 11-87 turkey	12 ga. (3" ammo)	156.0
Remington 11-87 field	12 ga. (3" ammo)	156.1
	12 ga. (2.75" ammo)	152.7
∞Remington 870	12 ga. (2.75" ammo)	155.2
∞Pietro Beretta	20 ga. (2.75" ammo)	154.2
∞Mossberg 183KE	.410 (3" ammo)	151.9
∞Mossberg 183KE	.410 (2.75" ammo)	151.8
Mossberg pump	20 ga. (2.75" ammo)	150.0
Mossberg bolt	.410 (3" ammo)	149.1
	.410 (2.75" ammo)	150.0

## SOURCES:

Data from: "Auditory Risk to Unprotected Bystanders Exposed to Firearm Noise." Flamme, G. et.al. J Am Acad Audiology. 22: 93-103, 2011. Measures made 1 m left of shooter.

\* Data from Fig. 2: "Assessment of Noise Exposure for Indoor and Outdoor Firing Ranges." Murphy, W. & Tubbs, R. J. Occupat. & Environ. Hygiene. 4: 688-697, 2007. Measures made 1 m left of shooter near mannequin.

^ Data from: "Estimates of auditory risk from Outdoor Impulse Noise II; Civilian Firearms." Flamme, G. et.al. Noise & Health, 11: 45, 231-241, 2009. Measures made at shooter-side.

Ψ Data from: "Comparison of Impulse Noise levels Generated by a .22 Caliber Starter Pistol and a .22 Revolver." Sondergaard, J. et.al. Presented at 11<sup>th</sup> International Congress on Noise as a Public Health Problem (ICBEN) 2011, London, UK. Measures made 5 cm left of ear-skull.

∞ Data from: "Auditory Risk Estimates for Youth Target Shooting." Meinke, D. et.al. International Jo. of Audiology. 53: S16-S25, 2014. Measures made near left ear of shooter.