

Peak dB SPL of Various Firearms (5 Studies)

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

RIFLES

dB SPL_{pk}

| | | |
|------------------------------------|--------------------|-------|
| 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

| | | dB SPL_{pk} |
|-----------------------------|-----------|----------------------------|
| *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 _{pk} |
|----------------------------|----------------------------|----------------------|
| ∞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 11th 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.