

Laboratory Attenuation Data for 3M™ Hearing Protection Products (Tested in Accordance with ANSI S3.19-1974)

*3M recommends fit testing of hearing protectors. If the NRR is used to estimate typical workplace protection, 3M recommends that the NRR be reduced by 50% or in accordance with applicable regulations.

Disposable Roll Down Earplugs

Device	NRR*	CSA Class	Octave Band Attenuation Data (dB)									
			Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
E-A-R™ Classic™	29 dB	AL	Mean Attenuation	37.4	40.9	44.8	43.8	36.3	41.9	42.6	46.1	47.3
			Standard Deviation	5.7	5.0	3.3	3.6	4.9	3.0	3.1	3.5	2.7
E-A-R™ Classic™ Small	29 dB	AL	Mean Attenuation	32.9	37.5	41.4	40.0	36.4	43.9	45.2	48.2	48.1
			Standard Deviation	4.2	4.4	4.2	4.3	4.0	3.0	2.5	2.6	4.4
E-A-R™ Classic™ Plus	33 dB	AL	Mean Attenuation	37.7	43.0	47.0	43.7	38.2	44.5	45.4	49.1	48.4
			Standard Deviation	4.9	4.7	3.3	3.4	3.6	2.8	3.6	4.4	4.4
E-A-R™ Classic™ Plus Metal Detectable	33 dB	AL	Mean Attenuation	37.7	43.0	47.0	43.7	38.2	44.5	45.4	49.1	48.4
			Standard Deviation	4.9	4.7	3.3	3.4	3.6	2.8	3.6	4.4	4.4
E-A-R™ Classic Soft™	31 dB	AL	Mean Attenuation	35.7	41.5	46.2	42.4	37.7	42.5	44.7	47.2	46.4
			Standard Deviation	7.4	8.5	6.2	5.3	2.4	3.7	3.5	5.4	4.5
E-A-R™ E-Z-Fit™	28 dB	AL	Mean Attenuation	35.6	36.9	39.0	37.5	35.1	42.3	44.9	47.7	48.7
			Standard Deviation	5.8	5.0	4.6	5.9	3.0	2.6	3.3	3.4	4.5
E-A-R™ TaperFit™ 2 (2 size earplug)	32 dB	AL	Mean Attenuation	36.4	39.1	41.7	40.7	38.1	44.5	45.9	48.4	48.1
			Standard Deviation	3.6	2.9	3.4	3.5	2.8	2.0	2.3	3.2	3.7
E-A-R™ Classic™ SuperFit™ 30	30 dB	AL	Mean Attenuation	32.9	37.5	41.4	40.0	36.4	43.9	45.2	48.2	48.1
			Standard Deviation	4.2	4.4	4.2	4.3	4.0	3.0	2.5	2.6	4.4
E-A-R™ Classic™ SuperFit™ 33	33 dB	AL	Mean Attenuation	37.7	43.0	47.0	43.7	38.2	44.5	45.4	49.1	48.4
			Standard Deviation	4.9	4.7	3.3	3.4	3.6	2.8	3.6	4.4	4.4
3M™ 1100 and 1110	29 dB	AL	Mean Attenuation	33.9	37.7	39.8	38.5	37.0	41.9	42.7	45.5	44.6
			Standard Deviation	4.7	5.5	5.6	4.8	3.1	3.8	3.4	4.0	3.4
E-A-Rsoft™ Yellow Neons™ (2 size earplug)	33 dB	AL	Mean Attenuation	38.4	40.3	43.2	41.8	38.6	45.0	45.7	49.6	47.3
			Standard Deviation	4.8	4.8	5.0	4.0	2.6	3.3	3.3	4.0	3.5
E-A-Rsoft™ Yellow Neon™ Blasts (2 size earplug)	33 dB	AL	Mean Attenuation	38.4	40.3	43.2	41.8	38.6	45.0	45.7	49.6	47.3
			Standard Deviation	4.8	4.8	5.0	4.0	2.6	3.3	3.3	4.0	3.5
E-A-Rsoft™ SuperFit™ (2 size earplug)	33 dB	AL	Mean Attenuation	38.4	40.3	43.2	41.8	38.6	45.0	45.7	49.6	47.3
			Standard Deviation	4.8	4.8	5.0	4.0	2.6	3.3	3.3	4.0	3.5
E-A-Rsoft™ Yellow Neons™ Metal Detectable Regular size only	32 dB	AL	Mean Attenuation	36.1	37.4	39.7	38.6	36.5	44.6	45.4	47.4	48.0
			Standard Deviation	3.6	4.9	4.3	3.1	2.7	3.2	4.1	3.2	3.2
3M™ Nitro™	32 dB	AL	Mean Attenuation	36.1	37.4	39.7	38.6	36.5	44.6	45.4	47.4	48.0
			Standard Deviation	3.6	4.9	4.3	3.1	2.7	3.2	4.1	3.2	3.2
3M™ Tattoo™	32 dB	AL	Mean Attenuation	36.1	37.4	39.7	38.6	36.5	44.6	45.4	47.4	48.0
			Standard Deviation	3.6	4.9	4.3	3.1	2.7	3.2	4.1	3.2	3.2
E-A-Rsoft™ Grippers™	31 dB	AL	Mean Attenuation	38.9	38.7	42.9	41.9	39.2	45.6	47.4	50.9	48.2
			Standard Deviation	4.6	5.4	5.7	5.3	3.4	3.8	3.8	5.3	5.2
E-A-Rsoft™ FX™	33 dB	AL	Mean Attenuation	40.8	40.8	43.6	41.8	37.9	45.2	47.6	49.0	46.8
			Standard Deviation	2.9	3.5	4.0	3.8	2.6	2.8	3.5	3.8	4.3

NOTE: The Noise Reduction Rating (NRR) shown for 2 size products are based on laboratory testing of regular and large sizes of the earplug.

Push-to-Fit Earplugs

Device	NRR*	CSA Class	Octave Band Attenuation Data (dB)									
			Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
E-A-R™ EXPRESS™ Pod Plugs™	25 dB	AL	Mean Attenuation	31.6	32.1	32.2	36.9	35.7	37.0	35.7	38.7	40.5
			Standard Deviation	4.3	4.6	4.8	4.0	3.3	3.3	4.2	5.1	3.4
E-A-R™ EXPRESS™ Pod Plugs™ Metal Detectable	25 dB	AL	Mean Attenuation	31.6	32.1	32.2	36.9	35.7	37.0	35.7	38.7	40.5
			Standard Deviation	4.3	4.6	4.8	4.0	3.3	3.3	4.2	5.1	3.4
E-A-R™ Push-Irs™	28 dB	AL	Mean Attenuation	37.8	37.2	39.8	38.8	35.0	40.0	37.7	38.7	41.1
			Standard Deviation	4.9	5.0	4.8	3.4	3.0	3.5	3.6	4.3	4.1
E-A-R™ Push-Irs™ Metal Detectable	28 dB	AL	Mean Attenuation	37.8	37.2	39.8	38.8	35.0	40.0	37.7	38.7	41.1
			Standard Deviation	4.9	5.0	4.8	3.4	3.0	3.5	3.6	4.3	4.1
E-A-R™ Push-Irs™ with Grip Rings	30 dB	AL	Mean Attenuation	40.2	39.4	41.0	41.0	37.4	41.1	44.0	48.3	47.3
			Standard Deviation	5.8	4.4	4.0	4.8	3.0	5.3	4.5	3.5	3.8
E-A-R™ Push-Irs™ SoftTouch™	31 dB	AL	Mean Attenuation	37.1	38.3	40.1	40.1	38.5	46.7	48.1	46.4	47.2
			Standard Deviation	5.2	5.8	3.3	4.3	3.4	3.8	2.5	3.6	3.1
3M™ E-A-R™ Skull Screws™	32 dB	AL	Mean Attenuation	38.2	37.7	39.9	40.2	38.1	45.0	46.9	48.3	45.6
			Standard Deviation	3.1	3.1	3.0	4.3	2.6	4.0	3.9	5.1	4.6
3M™ Pistorz™	29 dB	AL	Mean Attenuation	37.2	37.7	39.5	40.1	34.3	42.3	41.4	46.2	46.1
			Standard Deviation	5.4	5.2	5.0	3.4	2.8	2.9	3.3	4.7	3.4
3M™ No-Touch™	29 dB	AL	Mean Attenuation	36.9	36.7	39.4	40.4	35.9	42.9	45.5	48.8	45.9
			Standard Deviation	4.9	4.8	4.5	5.9	2.5	3.6	4.0	4.9	4.3

NOTE: The Noise Reduction Rating (NRR) shown for 2 size products are based on laboratory testing of regular and large sizes of the earplug.

Reusable Earplugs

Device	NRR*	CSA Class	Octave Band Attenuation Data (dB)									
			Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
E-A-R™ UltraFit™	25 dB	AL	Mean Attenuation	28.5	30.0	32.9	33.5	34.9	40.4	41.9	42.7	44.6
			Standard Deviation	4.7	4.6	4.6	4.0	3.6	5.4	5.1	3.3	4.1
E-A-R™ UltraFit™ Metal Detectable	25 dB	AL	Mean Attenuation	28.5	30.0	32.9	33.5	34.9	40.4	41.9	42.7	44.6
			Standard Deviation	4.7	4.6	4.6	4.0	3.6	5.4	5.1	3.3	4.1
E-A-R™ UltraFit Plus™	26 dB	AL	Mean Attenuation	32.3	33.2	34.1	36.0	36.4	40.8	39.7	43.2	44.1
			Standard Deviation	5.1	4.3	4.9	4.6	3.4	3.9	5.5	5.4	3.3
3M™ Tri-Flange™	26 dB	AL	Mean Attenuation	32.3	33.2	34.1	36.0	36.4	40.8	39.7	43.2	44.1
			Standard Deviation	5.1	4.3	4.9	4.6	3.4	3.9	5.5	5.4	3.3
E-A-R™ UltraFit™ 27	27 dB	AL	Mean Attenuation	35.2	35.3	36.2	36.9	36.2	43.4	42.7	43.7	44.3
			Standard Deviation	4.7	5.5	4.7	3.9	3.8	4.9	5.3	5.3	4.8
E-A-R™ HiFi™	12 dB	C	Mean Attenuation	14.5	15.3	16.9	18.9	22.5	23.0	19.8	22.3	24.6
			Standard Deviation	3.8	2.8	2.5	3.0	3.4	3.0	2.8	2.9	2.6
E-A-R™ Arc Plug™ (dual end) level dependent	0 dB	-	Mean Attenuation	4.7	4.2	6.0	9.5	16.7	18.6	16.3	16.7	17.2
			Standard Deviation	4.0	4.3	5.0	6.7	4.9	5.7	5.8	6.1	6.8
E-A-R™ Arc Plug™ (dual end) steady state	22 dB	AL	Mean Attenuation	32.7	31.8	33.0	32.0	34.5	37.3	38.9	43.8	43.3
			Standard Deviation	5.9	6.1	6.5	5.5	4.1	5.3	6.1	6.7	6.9
3M™ Combat Arms™ Earplug (dual end) level dependent	0 dB	-	Mean Attenuation	4.7	4.2	6.0	9.5	16.7	18.6	16.3	16.7	17.2
			Standard Deviation	4.0	4.3	5.0	6.7	4.9	5.7	5.8	6.1	6.8
3M™ Combat Arms™ Earplug (dual end) steady state	22 dB	AL	Mean Attenuation	32.7	31.8	33.0	32.0	34.5	37.3	38.9	43.8	43.3
			Standard Deviation	5.9	6.1	6.5	5.5	4.1	5.3	6.1	6.7	6.9
3M™ Combat Arms™ Single Tip Earplug (3 size product) level dependent	7 dB	C	Mean Attenuation	4.1	4.5	11.0	18.7	24.9	29.8	25.8	18.7	26.5
			Standard Deviation	2.7	2.8	3.9	3.2	3.3	2.7	3.3	3.6	3.3
3M™ Combat Arms™ Single Tip Earplug (3 size product) steady state	23 dB	BL	Mean Attenuation	30.3	28.7	32.2	31.9	31.7	38.0	36.1	31.9	37.8
			Standard Deviation	3.4	3.9	3.4	3.8	3.0	4.4	4.8	5.4	4.3

NOTE: The Noise Reduction Rating (NRR) shown for 3 size products are based on laboratory testing of the small, medium and large sizes of the earplug.

Banded Hearing Protectors

Device			NRR*	CSA	Octave Band Attenuation Data (dB)											
					(Hz)	125	250	500	1000	2000	3150	4000	6300	8000		
E-A-R™ Cabotex™ Under the Chin Position					20 dB	BL	Mean Attenuation	28.7	28.3	28.0	28.6	32.2	42.1	44.3	47.2	44.6
							Standard Deviation	6.8	6.3	5.8	4.9	3.7	3.2	3.8	3.9	5.7
E-A-R™ Cabotex™ Behind the Head Position					17 dB	BL	Mean Attenuation	25.8	24.9	25.8	27.3	31.7	40.7	42.1	43.0	41.5
							Standard Deviation	7.6	7.5	6.1	5.5	4.0	4.3	3.7	4.0	6.1
E-A-R Caps™ Under the Chin Position					17 dB	BL	Mean Attenuation	22.7	21.1	19.4	21.1	31.1	37.7	38.1	40.1	39.2
							Standard Deviation	4.4	4.1	3.3	2.5	3.1	2.4	2.5	3.8	4.2
E-A-Rflex™ 28 Under the Chin Position					28 dB	AL	Mean Attenuation	35.3	34.5	36.4	34.0	36.4	43.2	45.5	47.9	46.3
							Standard Deviation	6.3	5.2	3.9	3.5	3.2	3.6	3.1	4.4	4.4
E-A-Rflex™ Foam Tips Under the Chin Position					25 dB	AL	Mean Attenuation	32.7	32.8	34.2	35.2	38.2	45.5	45.5	49.0	48.2
							Standard Deviation	4.2	5.5	5.7	5.7	3.3	3.4	3.4	3.7	4.1
E-A-Rflex™ Foam Tips Behind the Head Position					25 dB	AL	Mean Attenuation	32.5	32.9	34.1	36.3	37.8	44.7	45.1	46.2	46.3
							Standard Deviation	4.6	5.1	5.6	5.9	4.5	4.0	3.4	3.2	3.6
E-A-Rflex™ Foam Tips Over the Head Position					25 dB	AL	Mean Attenuation	32.6	31.2	31.8	35.0	36.9	44.1	44.6	47.3	46.7
							Standard Deviation	4.6	5.2	5.4	5.4	3.4	4.3	3.9	4.2	3.7
E-A-Rflex™ Premolded Tips Under the Chin Position					27 dB	AL	Mean Attenuation	40.0	41.3	43.6	39.4	37.3	39.2	39.6	44.0	46.2
							Standard Deviation	5.7	6.2	6.6	5.4	4.0	4.7	6.2	6.1	5.6
E-A-Rflex™ Premolded Tips Behind the Head Position					24 dB	AL	Mean Attenuation	39.7	40.1	43.8	40.1	37.6	39.4	39.8	44.8	47.2
							Standard Deviation	8.8	8.9	8.9	7.5	6.3	5.9	6.4	5.7	3.8
E-A-Rflex™ Premolded Tips Over the Head Position					24 dB	AL	Mean Attenuation	38.6	39.3	42.0	38.0	36.5	37.4	36.9	43.0	45.6
							Standard Deviation	6.8	7.4	7.1	6.5	4.0	6.2	7.3	6.2	4.3
E-A-R™ Sweets™ Comfort Pods Behind the Head Position					19 dB	BL	Mean Attenuation	26.3	23.8	22.0	24.6	32.9	37.2	38.7	45.0	40.6
							Standard Deviation	3.6	3.6	3.7	2.8	3.2	3.9	2.7	3.0	3.4
E-A-R™ Sweets™ Flex 28 Tips Behind the Head Position					28 dB	AL	Mean Attenuation	35.7	35.1	37.6	38.2	36.7	45.6	46.7	47.4	44.9
							Standard Deviation	5.5	4.9	5.7	5.2	3.8	3.9	4.3	5.4	3.7

Laboratory Attenuation Data for 3M™ Hearing Protection Products (Tested in Accordance with ANSI S3.19-1974)

*3M recommends fit testing of hearing protectors. If the NRR is used to estimate typical workplace protection, 3M recommends that the NRR be reduced by 50% or in accordance with applicable regulations.

3M™ E-A-R™ Earmuffs			Octave Band Attenuation Data (dB)									
Device	NRR*	CSA Class	Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
Model 1000	20 dB	B	Mean Attenuation	11.7	16.2	26.5	31.6	32.5	35.0	38.1	41.8	41.8
Over the Head Position			Standard Deviation	3.3	2.7	2.7	2.6	3.0	2.8	2.5	4.7	3.8
Model 1000	22 dB	B	Mean Attenuation	14.8	17.1	27.7	35.2	34.0	36.8	39.1	44.0	43.3
Behind the Head Position			Standard Deviation	3.2	3.1	2.3	3.5	3.0	3.2	3.3	3.0	3.1
Model 1000	22 dB	A	Mean Attenuation	14.4	18.4	28.0	34.8	34.3	36.5	38.8	43.7	43.2
Under the Chin Position			Standard Deviation	3.7	3.4	2.5	2.8	3.4	2.6	2.9	2.9	3.0
Model 2000H	21 dB	B	Mean Attenuation	13.0	17.7	25.6	30.1	32.8	35.9	33.5	36.4	37.2
Hard Hat Attached			Standard Deviation	3.6	2.7	2.4	2.5	3.4	2.4	2.0	3.3	3.7
Model 3000	25 dB	A	Mean Attenuation	16.5	21.8	33.8	40.4	35.1	36.2	38.4	38.3	39.7
Over the Head Position			Standard Deviation	2.5	2.7	3.0	3.9	3.4	3.4	3.2	2.2	2.8
Model 3000	26 dB	AL	Mean Attenuation	21.2	22.3	33.1	41.2	34.7	36.1	38.3	37.9	38.7
Behind the Head Position			Standard Deviation	2.4	2.9	2.3	2.7	3.2	2.7	1.9	2.7	4.2
Model 3000	26 dB	AL	Mean Attenuation	20.5	22.7	32.6	41.2	34.6	37.3	38.9	37.3	39.5
Under the Chin Position			Standard Deviation	4.3	2.6	2.6	2.9	3.5	2.5	2.9	2.1	4.0

3M™ PELTOR™ Earmuffs			Octave Band Attenuation Data (dB)									
Device	NRR*	CSA Class	Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
Optime™ 105 - H10A Over the Head Position	30 dB	AL	Mean Attenuation	21.0	26.0	36.6	40.6	38.0	41.8	42.7	41.7	41.3
Standard Deviation			1.9	2.3	2.3	2.4	2.5	2.7	1.8	2.1	2.5	
Optime™ 105 - H10B Behind the Head Position	29 dB	AL	Mean Attenuation	21.0	26.4	37.1	40.0	36.9	40.4	42.1	41.6	42.2
Standard Deviation			2.7	2.6	3.0	3.6	2.4	3.4	2.8	2.9	2.5	
Optime™ 105 - H10P3 Hard Hat Attached	27 dB	AL	Mean Attenuation	20.7	25.5	36.2	38.3	35.7	39.3	41.3	42.1	41.3
Standard Deviation			3.0	3.3	3.9	3.4	2.9	3.5	3.4	2.5	3.1	
Optime™ 101 - H7A Over the Head Position	27 dB	A	Mean Attenuation	15.5	24.5	35.3	40.0	36.9	39.9	37.5	37.7	38.1
Standard Deviation			3.0	2.0	2.4	2.8	2.6	2.8	3.2	2.7	3.9	
Optime™ 101 - H7B Behind the Head Position	26 dB	A	Mean Attenuation	16.8	23.5	34.8	39.7	36.5	35.8	36.2	40.1	40.1
Standard Deviation			3.4	2.6	2.1	2.6	2.3	2.2	2.4	2.4	3.0	
Optime™ 101 - H7P3* Hard Hat Attached	24 dB	A	Mean Attenuation	15.3	21.8	33.7	40.0	36.2	35.5	34.7	37.2	35.5
Standard Deviation			2.6	2.5	2.6	3.3	3.8	3.0	2.7	3.1	3.2	
Optime™ 98 - H9A Over the Head Position	25 dB	A	Mean Attenuation	15.5	22.0	33.7	39.7	36.5	42.7	40.1	39.8	40.6
Standard Deviation			2.7	3.5	2.6	2.4	2.6	2.6	2.8	2.7	2.5	
Food Industry Earmuff - H9A-02 Over the Head Position	26 dB	A	Mean Attenuation	15.1	21.7	31.2	38.6	35.6	40.5	43.0	40.9	41.8
Standard Deviation			2.8	1.9	2.7	2.0	3.0	3.5	3.2	2.0	2.7	
Optime™ 98 - H9P3* Hard Hat Attached	23 dB	A	Mean Attenuation	14.8	20.2	30.5	38.7	36.4	38.9	36.3	39.4	38.3
Standard Deviation			2.5	3.1	3.4	2.6	3.0	2.9	3.0	3.7	2.9	
Optime™ 95 - H8A Over the Head Position	21 dB	B	Mean Attenuation	12.4	15.0	26.2	35.2	35.2	30.9	33.3	36.0	37.5
Standard Deviation			2.6	1.8	2.5	3.2	2.5	3.0	2.0	4.5	3.2	
Optime™ 95 - H8B Behind the Head Position	21 dB	B	Mean Attenuation	13.2	14.2	25.1	34.2	35.4	30.4	35.1	37.0	38.5
Standard Deviation			2.9	1.6	2.6	2.6	3.0	2.8	2.1	4.0	2.8	
Optime™ 95 - H8F Over the Head Position	21 dB	B	Mean Attenuation	12.4	15.0	26.2	35.2	35.2	30.9	33.3	36.0	37.5
Standard Deviation			2.6	1.8	2.5	3.2	2.5	3.0	2.0	4.5	3.2	
Optime™ 95 - H9P3E Hard Hat Attached	21 dB	B	Mean Attenuation	12.3	17.2	27.8	32.8	33.9	36.5	36.0	36.5	36.8
Standard Deviation			2.7	3.0	2.5	2.8	2.9	4.1	3.0	4.3	4.6	
H31A Over the Head Position	24 dB	A	Mean Attenuation	13.2	20.4	30.8	35.8	37.0	41.3	37.1	34.1	35.5
Standard Deviation			2.6	2.5	2.7	2.6	3.2	2.5	2.5	2.9	2.2	
H31P3* Hard Hat Attached	23 dB	A	Mean Attenuation	12.2	18.9	29.7	34.8	37.2	37.0	35.8	35.0	37.4
Standard Deviation			2.1	2.6	2.3	2.7	3.6	2.9	2.4	4.0	3.9	
H5058 Welding Helmet Earmuff Behind the Head Position	17 dB	B	Mean Attenuation	12.7	13.2	22.9	21.6	31.9	40.2	39.5	37.6	38.6
Standard Deviation			5.5	2.1	2.6	2.3	2.5	3.4	3.5	3.6	3.5	
X1A Over the Head Position	22 dB	A	Mean Attenuation	16.0	18.3	27.7	37.6	35.1	42.2	41.4	39.4	39.3
Standard Deviation			5.2	3.1	3.0	3.5	2.8	2.8	2.6	2.6	3.8	
X1P3E Hard Hat Attached	21 dB	B	Mean Attenuation	13.8	17.3	27.4	35.6	34.5	41.8	40.1	36.8	36.1
Standard Deviation			4.5	3.2	2.9	2.8	2.9	2.9	2.9	3.7	4.1	
X2A Over the Head Position	24 dB	A	Mean Attenuation	14.9	21.6	31.8	41.0	36.7	39.1	38.5	39.0	39.0
Standard Deviation			4.2	3.3	2.3	2.5	3.0	2.4	2.0	2.8	3.4	
X2P3E Hard Hat Attached	24 dB	A	Mean Attenuation	15.2	21.3	32.6	39.2	35.9	37.7	37.1	38.6	37.3
Standard Deviation			4.2	3.1	2.8	3.2	3.3	2.8	2.1	2.5	3.0	
X3A Over the Head Position	28 dB	AL	Mean Attenuation	23.4	27.7	29.4	42.5	38.8	39.3	42.3	39.5	39.5
Standard Deviation			3.0	2.1	3.1	2.6	2.7	4.0	3.3	2.6	2.8	
X3P3E Hard Hat Attached	25 dB	AL	Mean Attenuation	19.6	24.1	29.7	39.1	35.7	38.2	40.3	37.1	35.4
Standard Deviation			3.3	3.1	2.5	3.9	3.1	4.7	3.5	4.4	4.9	
X4A Over the Head Position	27 dB	AL	Mean Attenuation	20.5	24.1	32.8	40.7	37.6	44.5	45.4	42.4	42.3
Standard Deviation			4.6	3.4	1.9	2.8	2.9	3.1	2.5	3.1	3.0	
X4P3E Hard Hat Attached	25 dB	A	Mean Attenuation	18.1	21.6	32.4	40.1	36.5	44.2	46.2	43.7	43.3
Standard Deviation			4.9	2.6	2.0	2.3	3.2	3.9	2.7	2.4	3.0	
X5A Over the Head Position	31 dB	AL	Mean Attenuation	23.9	30.5	41.1	43.0	38.0	43.1	44.0	41.1	40.3
Standard Deviation			4.1	2.2	2.8	2.9	2.7	2.9	2.4	2.6	2.2	
X5P3E Hard Hat Attached	31 dB	AL	Mean Attenuation	21.6	29.3	41.0	42.4	37.5	41.7	42.5	40.6	40.5
Standard Deviation			3.2	2.5	2.8	3.1	2.2	2.3	2.5	2.9	2.6	

Laboratory Attenuation Data for 3M™ Hearing Protection Products (Tested in Accordance with ANSI S3.19-1974)

*3M recommends fit testing of hearing protectors. If the NRR is used to estimate typical workplace protection, 3M recommends that the NRR be reduced by 50% or in accordance with applicable regulations.

3M™ PELTOR™ Communications Eartips

Device	NRR*	CSA Class	Octave Band Attenuation Data (dB)									
			Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000
ORA TAC - Classic™ Eartip	31 dB	AL	Mean Attenuation	37.3	38.1	42.6	40.8	36.7	42.6	43.5	48.1	45.9
			Standard Deviation	4.8	3.5	3.6	2.7	3.3	3.6	4.3	5.2	3.8
ORA TAC - Skull Screw™ Eartip	29 dB	AL	Mean Attenuation	38.0	36.8	39.2	44.8	37.7	43.1	42.6	46.4	45.2
			Standard Deviation	5.0	5.1	5.8	5.2	4.2	5.3	5.6	5.4	2.7
ORA TAC - UltraFit™ Eartip	20 dB	AL	Mean Attenuation	35.1	35.1	36.3	32.3	33.7	37.0	37.7	39.1	39.1
			Standard Deviation	9.3	7.3	8.1	6.5	5.5	7.4	6.5	6.9	5.6
ORA TAC - CCC-GRM-25 Eartip	26 dB	AL	Mean Attenuation	34.1	30.2	34.7	34.7	35.4	38.4	36.7	42.9	43.8
			Standard Deviation	3.4	4.1	3.7	3.9	3.7	4.0	4.3	4.1	4.2
TEP-100 Tactical Earplug - Skull Screw™ Eartip	30 dB	AL	Mean Attenuation	36.3	35.7	39.8	41.4	40.4	43.0	41.9	48.2	46.0
			Standard Deviation	5.3	5.5	5.5	4.2	3.4	4.6	3.5	4.6	4.2
TEP-100 Tactical Earplug - UltraFit™ Eartip (3 size product)	23 dB	AL	Mean Attenuation	36.2	33.7	34.7	32.0	34.5	37.4	35.6	38.0	37.5
			Standard Deviation	5.1	5.2	5.5	3.9	3.4	5.3	6.5	4.4	5.4
TEP-100 Tactical Earplug - CCC-GRM-25 Eartip	27 dB	AL	Mean Attenuation	34.5	30.6	36.3	35.2	35.5	38.6	37.6	44.6	45.7
			Standard Deviation	4.2	3.9	4.1	3.0	3.5	3.3	3.8	3.6	4.3
E-A-R buds™ - Skull Screw™ Eartip	29 dB	AL	Mean Attenuation	38.0	36.8	39.2	44.8	37.7	43.1	42.6	46.4	45.2
			Standard Deviation	5.0	5.1	5.8	5.2	4.2	5.3	5.6	5.4	2.7
E-A-R buds™ - UltraFit™ Eartip	20 dB	AL	Mean Attenuation	35.1	35.1	36.3	32.3	33.7	37.0	37.7	39.1	39.1
			Standard Deviation	9.3	7.3	8.1	6.5	5.5	7.4	6.5	6.9	5.6
E-A-R buds™ - CCC-GRM-25 Eartip	27 dB	AL	Mean Attenuation	34.5	30.6	36.3	35.2	35.5	38.6	37.6	44.6	45.7
			Standard Deviation	4.2	3.9	4.1	3.0	3.5	3.3	3.8	3.6	4.3

NOTE: The Noise Reduction Rating (NRR) shown for 3 size products are based on laboratory testing of the small, medium and large sizes of the eartip

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