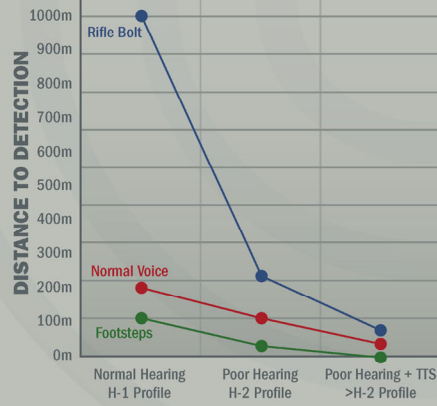


## HEARING IMPACT ON PERFORMANCE

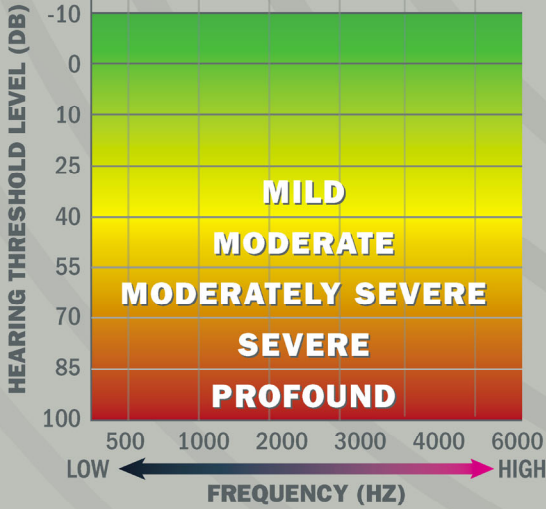
	GOOD HEARING	POOR HEARING
TIME TO IDENTIFY TARGET	40 SEC	90 SEC
INCORRECT COMMAND HEARD	1%	37%
CORRECT TARGET IDENTIFICATION	98%	68%
ENEMY TARGETS KILLED	94%	41%
WRONG TARGET SHOT	0%	8%
TANK CREW KILLED BY ENEMY	7%	28%

Ref: Garinther and Peters, 1990, Tank Gunner Performance and Hearing Impairment, Army RDBA Bulletin, 1990, Jan-Feb 1-5.

## IMPACT OF HEARING LOSS ON MISSION



Price, G. R., Kalb, J. T. and Garinther, G. R. (1989), "Toward a measure of auditory handicap in the Army", Ann Otol Rhinol Laryngol, 98, 43-52.



## HEARING IS A CRITICAL SENSE

- Hearing loss - Painless • Progressive • Permanent • Preventable
- The enemy is often heard before they are seen
- Sound information is available from all directions
- Good hearing can make the difference between life & death
- Effective battlefield communications requires good hearing
- Good hearing increases survivability and lethality

## LEVELS OF NOISE

<b>FAINT</b>	
20	- Leaves rustling
<b>SOFT</b>	
30	- Whisper
40	- Quiet library
<b>MODERATE</b>	
50	- Moderate rainfall
60	- Normal conversation - Dishwashers
<b>LOUD</b>	
70	- Traffic - Vacuums
80	- Alarm clocks

<b>VERY LOUD</b>	Dangerous over 30 minutes
90	- Lawnmowers - Power tools - Blenders - Hair dryers
<b>100</b>	- Snowmobiles - MP3 players (at full volume)
<b>110</b>	- Concerts (any genre of music) - Car horns - Sporting events
<b>DANGEROUS</b>	Dangerous over 30 seconds
<b>120</b>	- Jet planes (during take off)
<b>PAINFUL</b>	Use hearing protection or avoid
<b>130</b>	- Jackhammers - Ambulances
<b>140</b>	- Fireworks - Gun shots - Custom car stereos (at full volume)

**REFERENCE AUDIOGRAM**  
(This form is subject to the Privacy Act of 1974 - use Blanket PAS - DD Form 205)

1. ZIP CODE(APO/FP/PAAS)

2. DOD COMPONENT  
A - ARMY F - AIR FORCE 1 - OTHER G - NATIONAL GUARD  
N - NAVY M - MARINE CORPS R - REGULAR V - RESERVE 3 - OTHER

4. SOCIAL SECURITY NUMBER 5. NAME (Last, First, Middle Initial) 6. DATE OF BIRTH (YYYYMMDD) 7. SEX  
M - MALE F - FEMALE

8. PAY GRADE UNIFORMED SERVICES 9. PAY GRADE CIVILIAN 10. SERVICE DUTY OCCUPATION CODE 11. MAILING ADDRESS OF ASSIGNMENT

13. LOCATION - PLACE OF WORK 13. MAJOR COMMAND 14. DUTY TELEPHONE (Include area code)

15. REASON FOR CONDUCTING AUDIOGRAM  
1 - REFERENCES ESTABLISHED PRIOR TO INITIAL DUTY IN HAZARDOUS NOISE AREAS 2 - REFERENCE ESTABLISHED FOLLOWING EXPOSURE IN NOISE DUTIES 3 - REFERENCE RE-ESTABLISHED AFTER FOLLOW-UP PROGRAM

16. AUDIOMETRIC DATA  
RE: ANS S3.6 - 1989  
LEFT: 500 1000 2000 3000 4000 6000 500 1000 2000 3000 4000 6000  
RIGHT: 0 5 5 10 15 5 0 0 5 0 0 5

17. DUTY OF AUDIOGRAM (YYYYMMDD)

18. MEETS REFERRAL CRITERIA  
1 - NO 2 - YES 19. MILITARY TIME OF DAY (optional) 20. HOURS SINCE LAST NOISE EXPOSURE 21. EAR, NOSE, AND THROAT PROBLEM AT TIME OF TEST  
1 - NO 2 - YES 3 - UNDETERMINED

22. EXAMINER  
a. NAME (Last, First, Middle Initial) b. TRAINING CERTIFICATION NUMBER c. SERVICE DUTY OCCUPATION CODE d. OFFICE SYMBOL

23. AUDIOMETER  
a. TYPE (Manual, Self-Recording (Automatic), Microprocessor) b. MODEL c. MANUFACTURER d. SERIAL NUMBER e. LAST ELECTROACOUSTIC CALIBRATION DATE (YYYYMMDD)

24. PERSONAL HEARING PROTECTION  
a. TYPE USED: 1 - SINGLE FLANGE (V314) 4 - EAR CANAL CAPS 5 - NOISE MUFFS 6 - OTHER  
b. HARD FORMED EARPLUGS: 1 - NO 2 - YES c. PROTECTION LEVEL: 1 - NO 2 - YES  
d. GLASSES WORN (including goggles) 1 - NO 2 - YES  
e. FREQUENCY GLASSES WORN: 1 - ALWAYS 2 - SOMETIMES 3 - NEVER

25. REMARKS (Include exposure date)

**HEARING CONSERVATION DATA**  
(This form is subject to the Privacy Act of 1974 - use Blanket PAS - DD Form 205)

1. ZIP CODE(APO/FP/PAAS)

2. DOD COMPONENT  
A - ARMY F - AIR FORCE 1 - OTHER DOD ACTIVITY G - NATIONAL GUARD  
N - NAVY M - MARINE CORPS R - REGULAR V - RESERVE 3 - OTHER

4. SOCIAL SECURITY NUMBER 5. NAME (Last, First, Middle Initial) 6. DATE OF BIRTH (YYYYMMDD) 7. SEX  
M - MALE F - FEMALE

8. PAY GRADE UNIFORMED SERVICES 9. PAY GRADE CIVILIAN 10. SERVICE DUTY OCCUPATION CODE 11. MAILING ADDRESS OF ASSIGNMENT

13. LOCATION - PLACE OF WORK 13. MAJOR COMMAND 14. DUTY TELEPHONE (Include area code)

15. AUDIOMETRY  
a. PURPOSE 3 - 90 DAY 2 - ANNUAL 4 - OTHER

16. AUDIOMETRIC DATA  
RE: ANS S3.6 - 1989  
LEFT: 500 1000 2000 3000 4000 5000 500 1000 2000 3000 4000 5000  
RIGHT: 0 0 10 30 70 50 0 10 10 15 10 0

17. CURRENT AUDIOGRAM DATE (YYYYMMDD)

18. REFERENCE AUDIOGRAM DATE (YYYYMMDD)

19. SIGNIFICANT THRESHOLD SHIFT (STS)  
a. THRESHOLD SHIFT: -5 5 20 55 45 0 10 5 15 10 -5  
b. THRESHOLD SHIFT: 1 - NO 2 - YES

20. EXAMINER NAME (Last, First, Middle Initial) 21. TRAINING CERTIFIC. NO. CODE 22. SERVICE DUTY OCCUPATION CODE 23. OFFICE SYMBOL

24. AUDIOMETER TYPE  
1 - MANUAL 2 - SELF-RECORDING (Automatic) 3 - MICROPROCESSOR  
a. MODEL b. MANUFACTURER c. SERIAL NUMBER d. LAST ELECTROACOUSTIC CALIBRATION DATE (YYYYMMDD)

25. FOLLOWUP NO. 1  
a. MINIMUM 24 HOURS NOISE FREE SINCE CURRENT AUDIOGRAM (See term 15.4.)  
LEFT: 500 1000 2000 3000 4000 5000 500 1000 2000 3000 4000 5000  
RIGHT: 0 0 10 30 70 50 0 10 10 15 10 0

26. CURRENT AUDIOGRAM DATE (YYYYMMDD)

27. REFERENCE AUDIOGRAM DATE (YYYYMMDD)

28. SIGNIFICANT THRESHOLD SHIFT (STS)  
a. THRESHOLD SHIFT: -5 5 20 55 45 0 10 5 15 10 -5  
b. THRESHOLD SHIFT: 1 - NO 2 - YES

29. EXAMINER NAME (Last, First, Middle Initial) 30. TRAINING CERTIFIC. NO. CODE 31. SERVICE DUTY OCCUPATION CODE 32. OFFICE SYMBOL

33. AUDIOMETER TYPE  
1 - MANUAL 2 - SELF-RECORDING (Automatic) 3 - MICROPROCESSOR  
a. MODEL b. MANUFACTURER c. SERIAL NUMBER d. LAST ELECTROACOUSTIC CALIBRATION DATE (YYYYMMDD)