

# MOSCOW 2018 Oct

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# How to manage hearing loss among Pilots ?”

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First...

« I have no conflict of interest »

## EASA rules: Part Med.B.080, AMC.B.080

- Class 1( ATPL, CPL)
- Class 2 (PPL –A – Hel – SPL -Balloon)
- Class 3 ( ATCO)
- LAPL ( A – Hel – S – Balloon)
- Cabin Crew

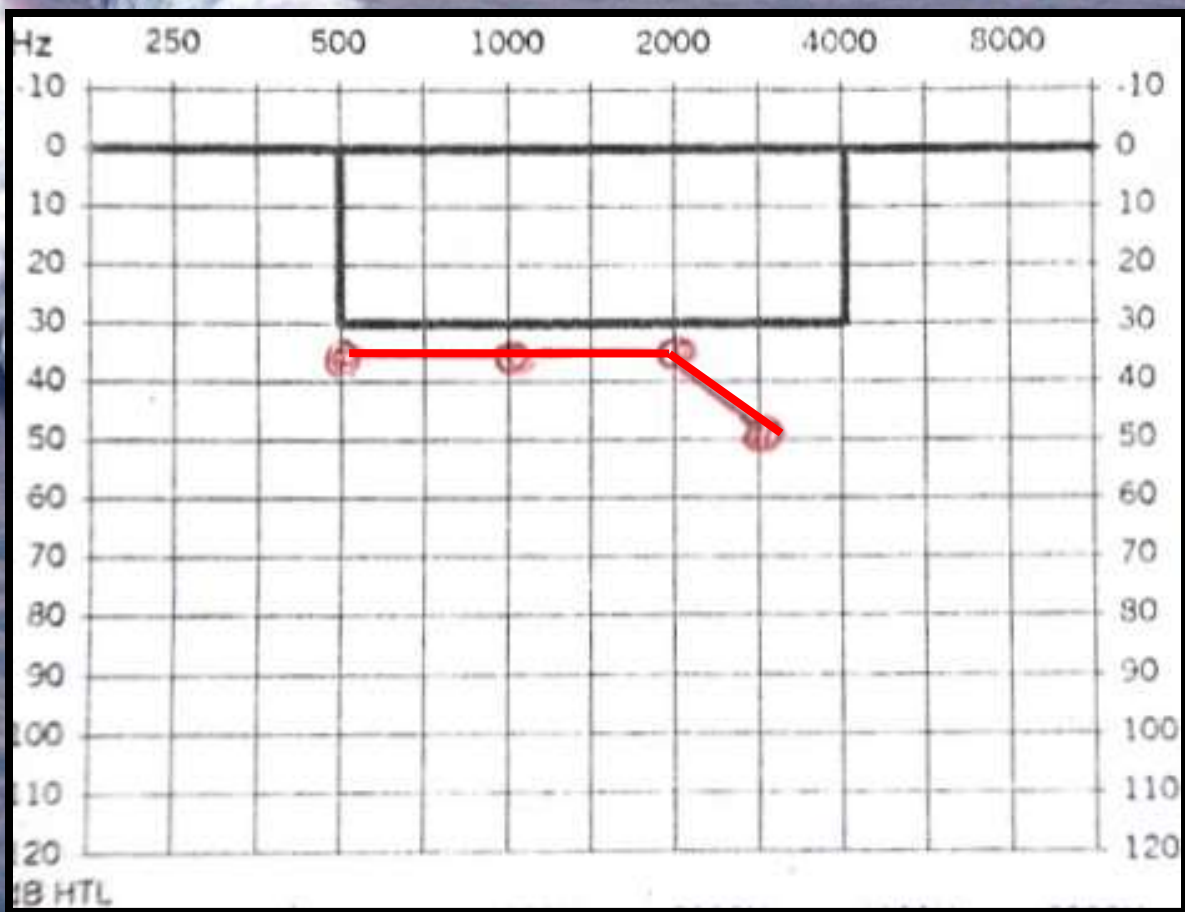
# EASA requirements:

## Class 1, Class 2 IFR, Class 3, Cabin Crew :

- Initial: No hearing loss in each ear, when tested separately, more than 35 dB (HL) at any frequencies 500, 1000 and 2000 Hz, or of more than 50 dB (HL) at 3000 Hz
- Revalidation or renewal, applicants with greater hearing loss shall demonstrate satisfactory functional hearing ability in operational environment







# EASA requirements:

## Class 2 :

- Initial: correct understanding conversational speech ,  
each ear separately 2 m back turned
- Revalidation or renewal, applicants with greater hearing loss shall demonstrate satisfactory functional hearing ability in operational environment
- LAPL:  
Idem but with both ear .  
If not : “functional hearing ability”



A  
Each examination: correct understanding conversational speech ,  
(each ear separately) 2 m back turned





“Questions”:

1)What means “ functional hearing ability” ?

2)Distinction between type of hearing loss?

3)Hearing aids?

4)Pilot Class 2 or LAPL with profound hearing loss: able ?  
Fit? Fit to fly?

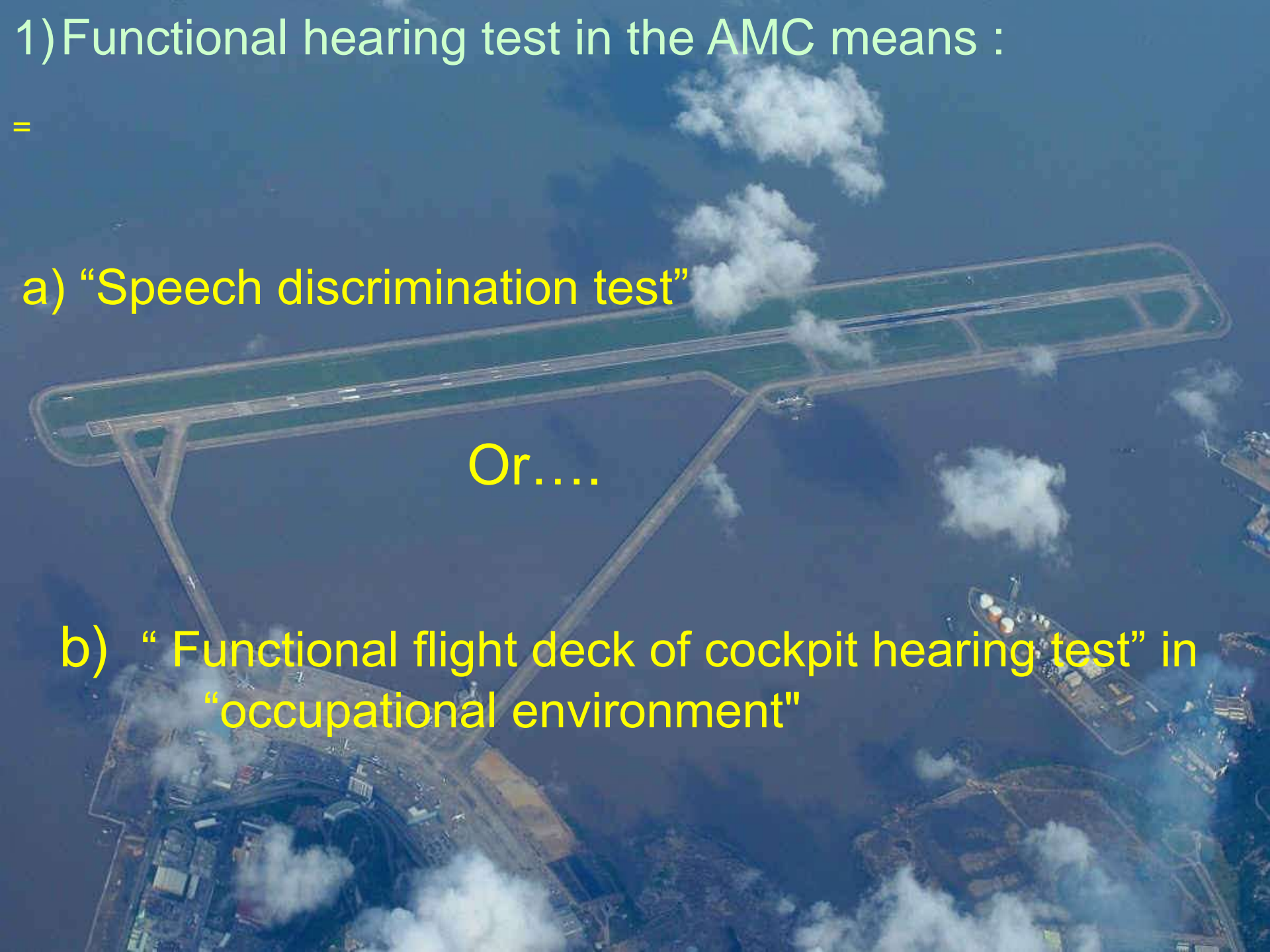
1) Functional hearing test in the AMC means :

=

a) "Speech discrimination test"

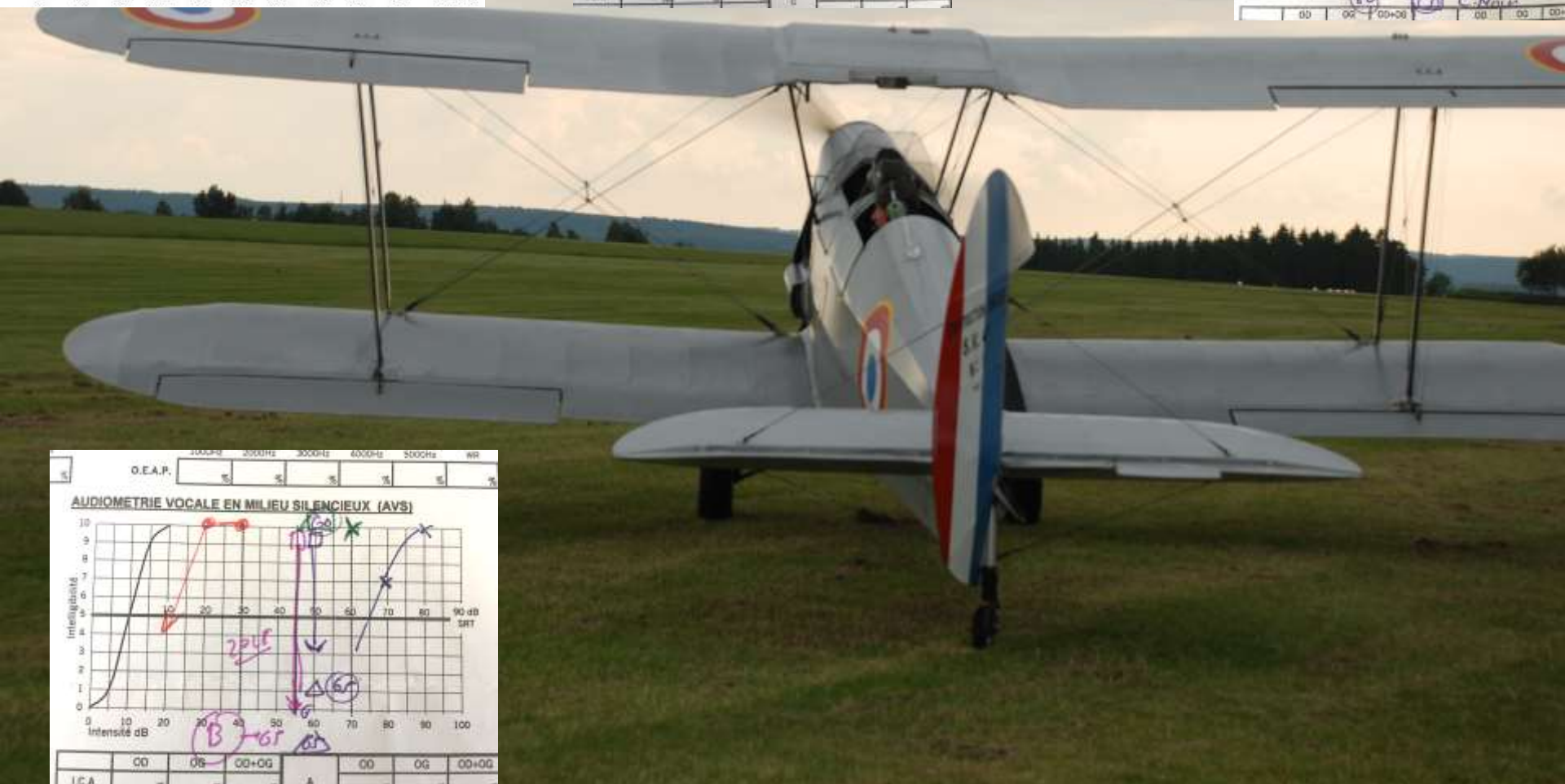
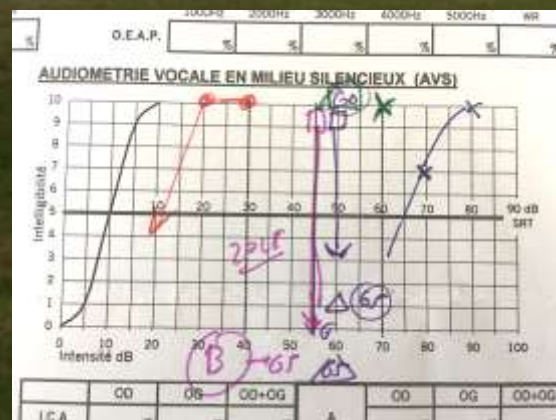
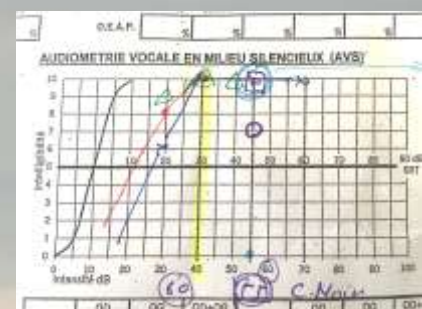
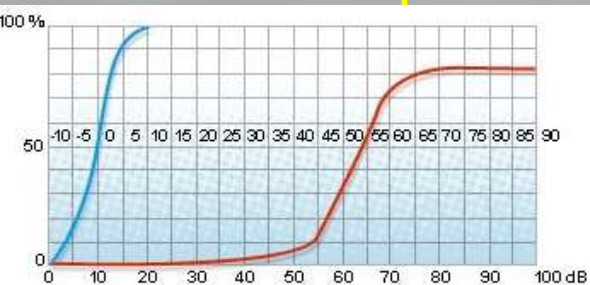
Or....

b) "Functional flight deck of cockpit hearing test" in  
"occupational environment"





# Speech audiometry: yes , but wich one?





“Questions”:

1) What means “ functional hearing ability” ?

2) No distinction between type of hearing loss

3) Hearing aids?

1) Pilot Class 2 or LAPL with profound hearing loss: able ?  
Fit? Fit to fly?



b) “ Functional flight deck of cockpit hearing test”  
or “occupational environment”

a) Flight test with examiner? : ... expensive.....

b) Our process: Aerosound. What means this test?



FLIGHT TEST ? ....OR ....



b) “ Functional flight deck of cockpit hearing test” or  
“occupational environment”

a) Flight test with examiner? : ... expensive.....

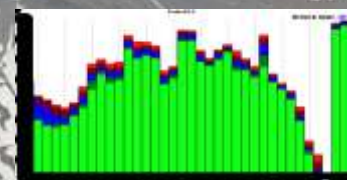
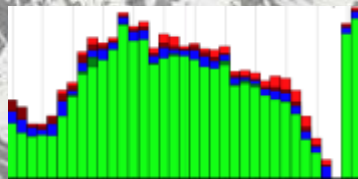
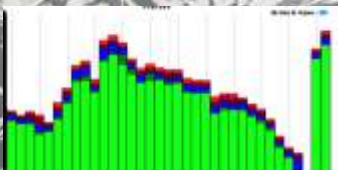
b) Our process: Aerosound. What means this test?  
Flight Test “in vitro”

# TEST: Methode 1) Cockpit

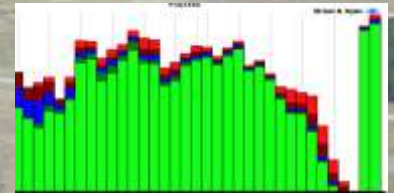
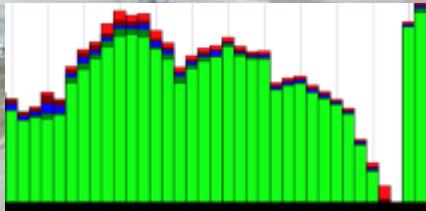
noise













And others ...





## 2) ATC messages record

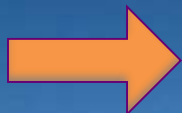








Cockpit noise  
Channel 1



Amplifier

To "cockpit"



Channel 2  
ATC messages

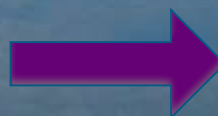


≠ headset

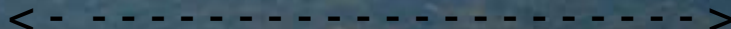


intercom

To examiner



To pilot







# Procedure:

- 25 ATC communications
- Read back correctly the essential cues of ATC-communication
- Allowed to make notes
- Cockpit noise corresponding to flying duty
- Pilot may use his own headset (with ANR possibly)





...Suitable for all situations...





“Questions”:

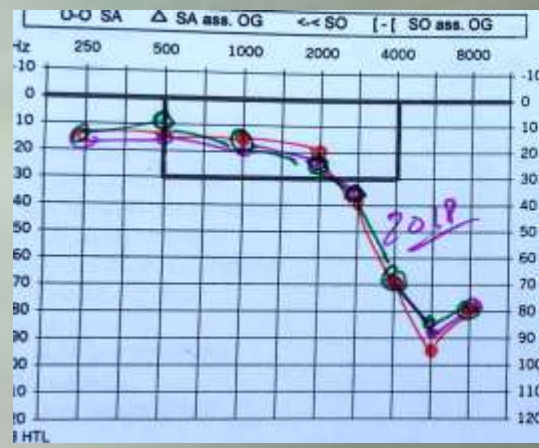
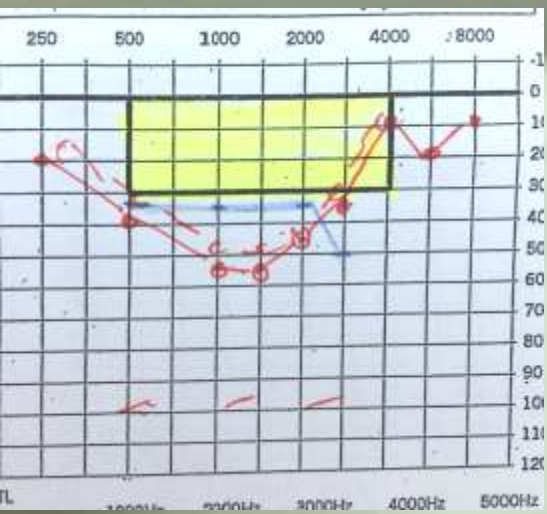
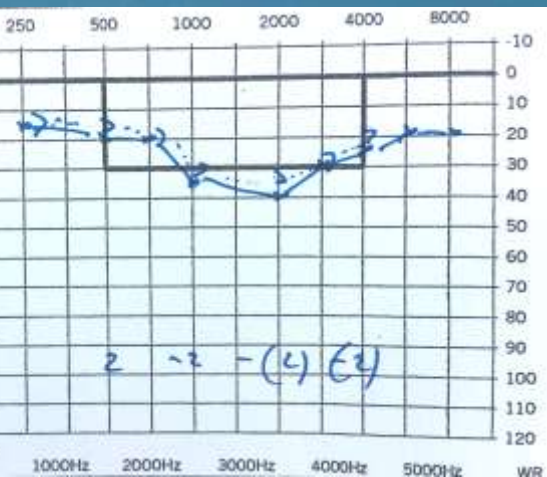
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2) **No distinction between type of hearing loss**

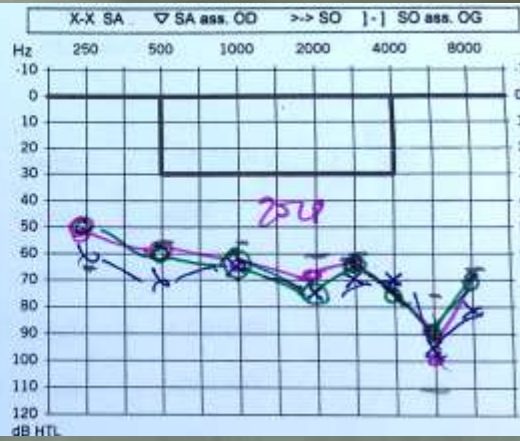
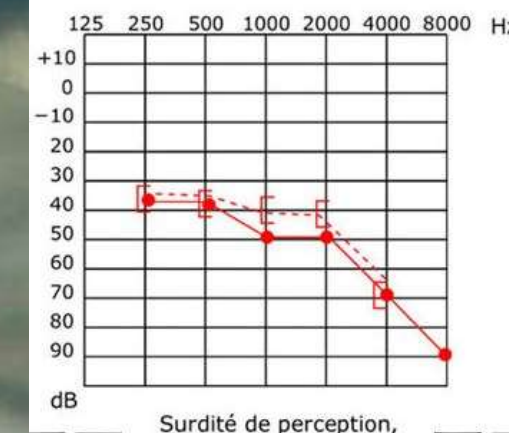
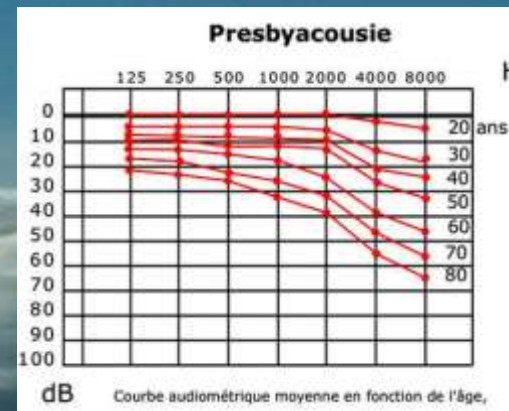
3) Hearing aids?

4) Pilot Class 2 or LAPL with profound hearing loss: able ?  
Fit? Fit to fly?





Fca	SCF
	Weber
250Hz	
500Hz	
1000Hz	
2000Hz	
4000Hz	





## “Questions”:

1) What means “ functional hearing ability” ?

2) No distinction between type of hearing loss

3) Hearing aids?

4) Pilot Class 2 or LAPL with profound hearing loss: able ?  
Fit? Fit to fly?





Only renewal for Class 1,3 & CC

Possible initial for Class 2 &  
LAPL

-Provide optimal hearing  
function

-Well tolerated

-Suitable for aviation  
purpose





## “Questions”:

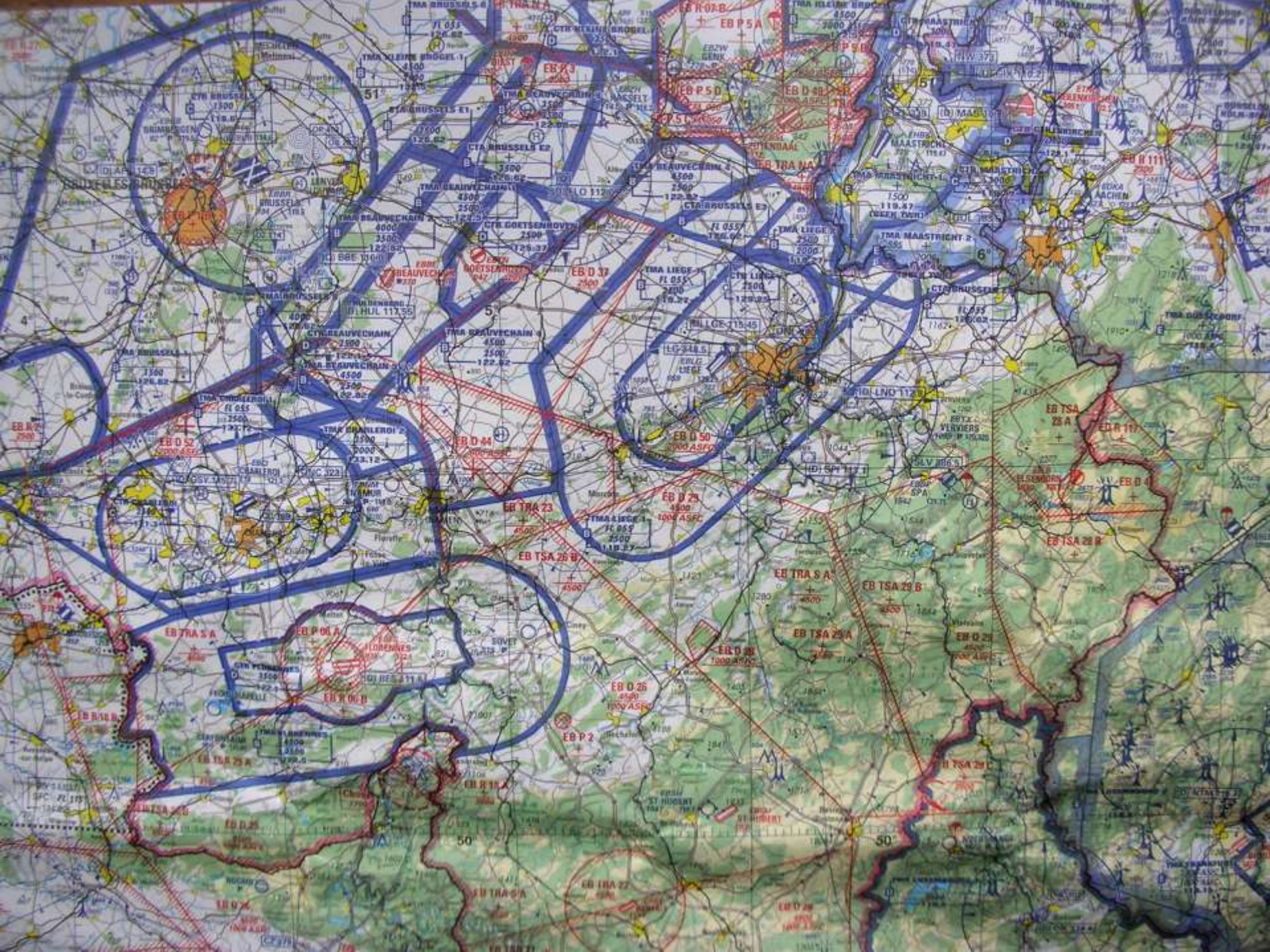
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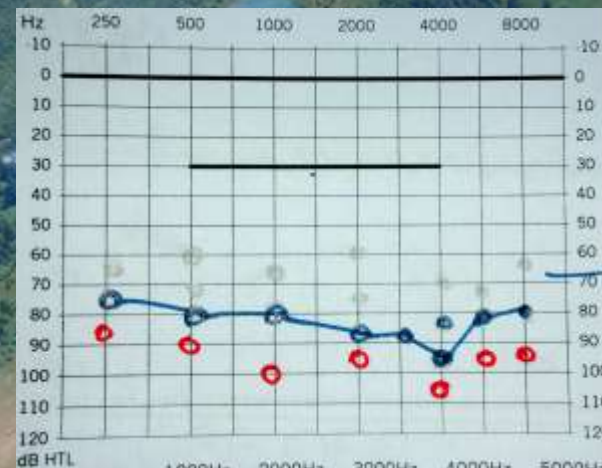
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Fit? Fit to fly?







NB: Radio NOT mandatory for Glider , ULM, SEP if to remain outside controlled airspace



ICAO:

## Profound Hearing Loss (Class 2)

Class 2 applicants who are or become completely deaf may be considered for certification with special restriction of 'SSL' – 'no flights to or from airfields where ATC is provided by radio and remain outside controlled airspace'.



Conclusion: discuss, analyze and know the air environment

Благодарю за внимание. Вопросов ?

