The why, what, when and how of using non-conventional test stimuli in behavioural testing

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Hummingbird Clinic

Specialist clinic designed around the needs of a child with complex needs or Autism

Challenged the status quo of what an audiology clinic should look like

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Agenda

Why?

What?

When?

How?

Conclusion

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Why?

Distressed by unfamiliarity

Limited attention

Highly focused interests

Self directed

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Why?

Why do anything different?

Why not just review in 3 months?

Why not just perform a GA ABR?

Why not just discharge them?

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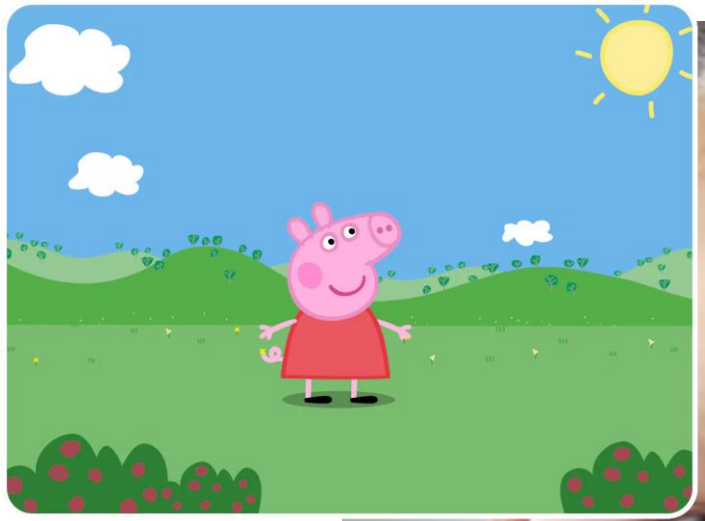
What?



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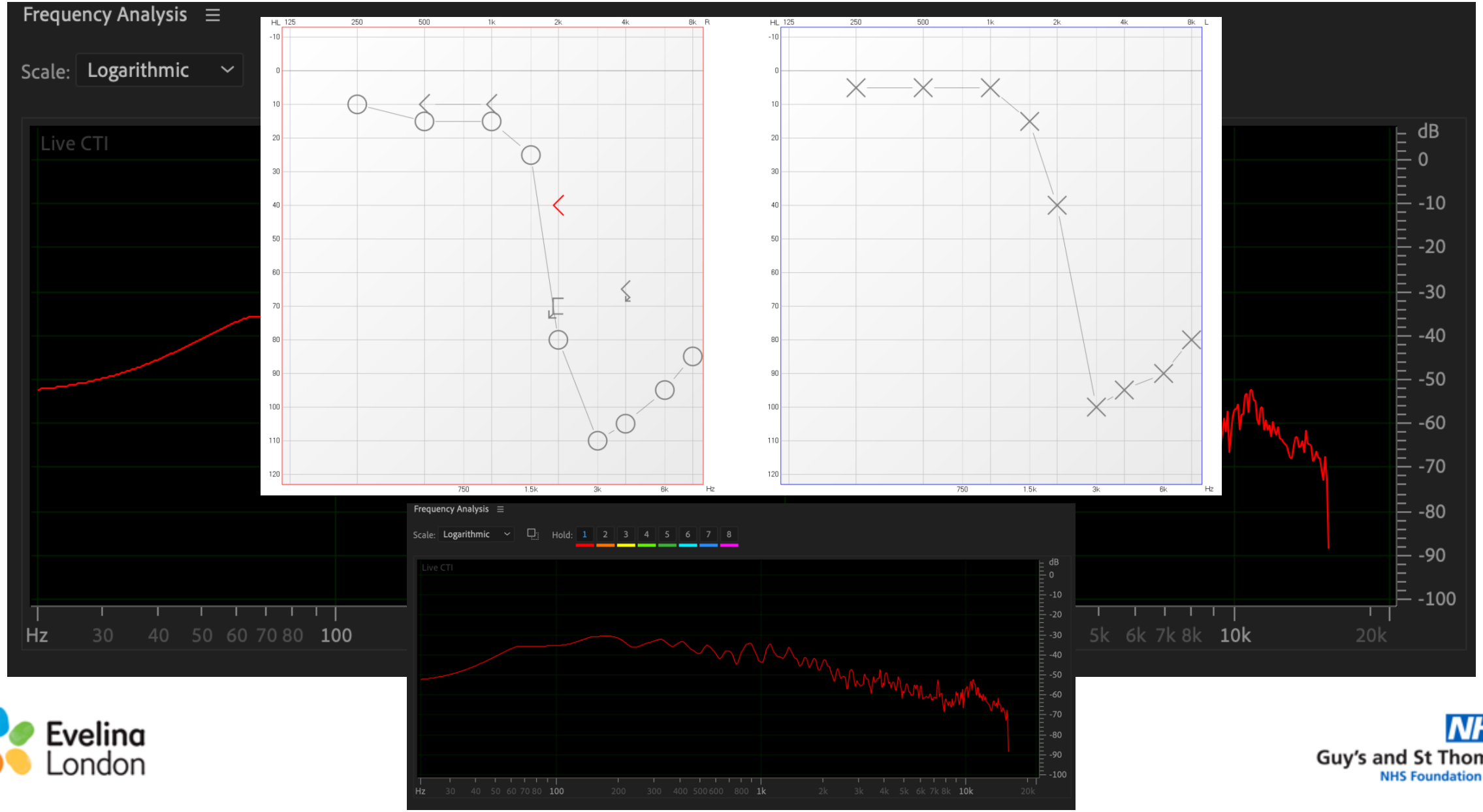

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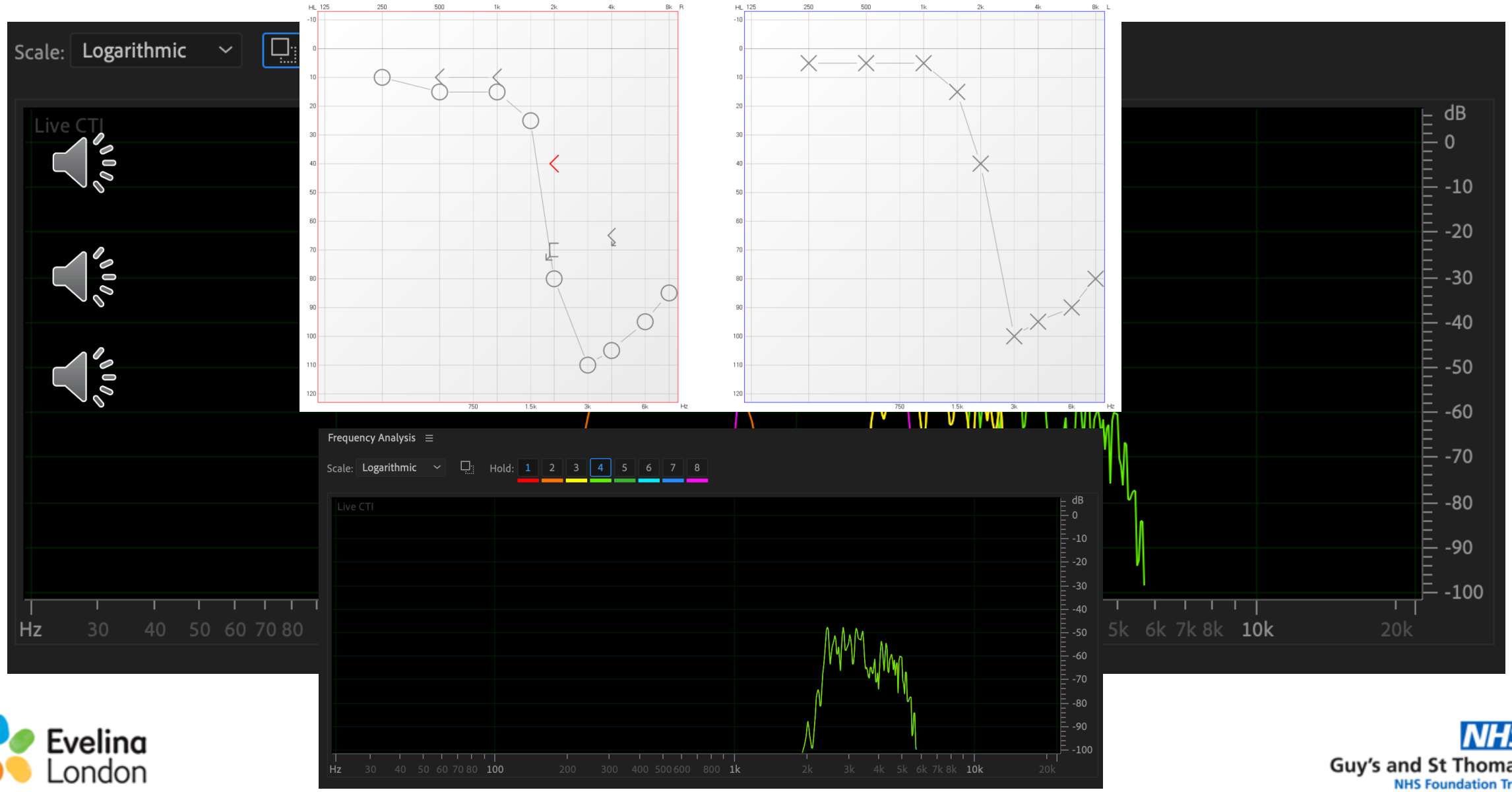

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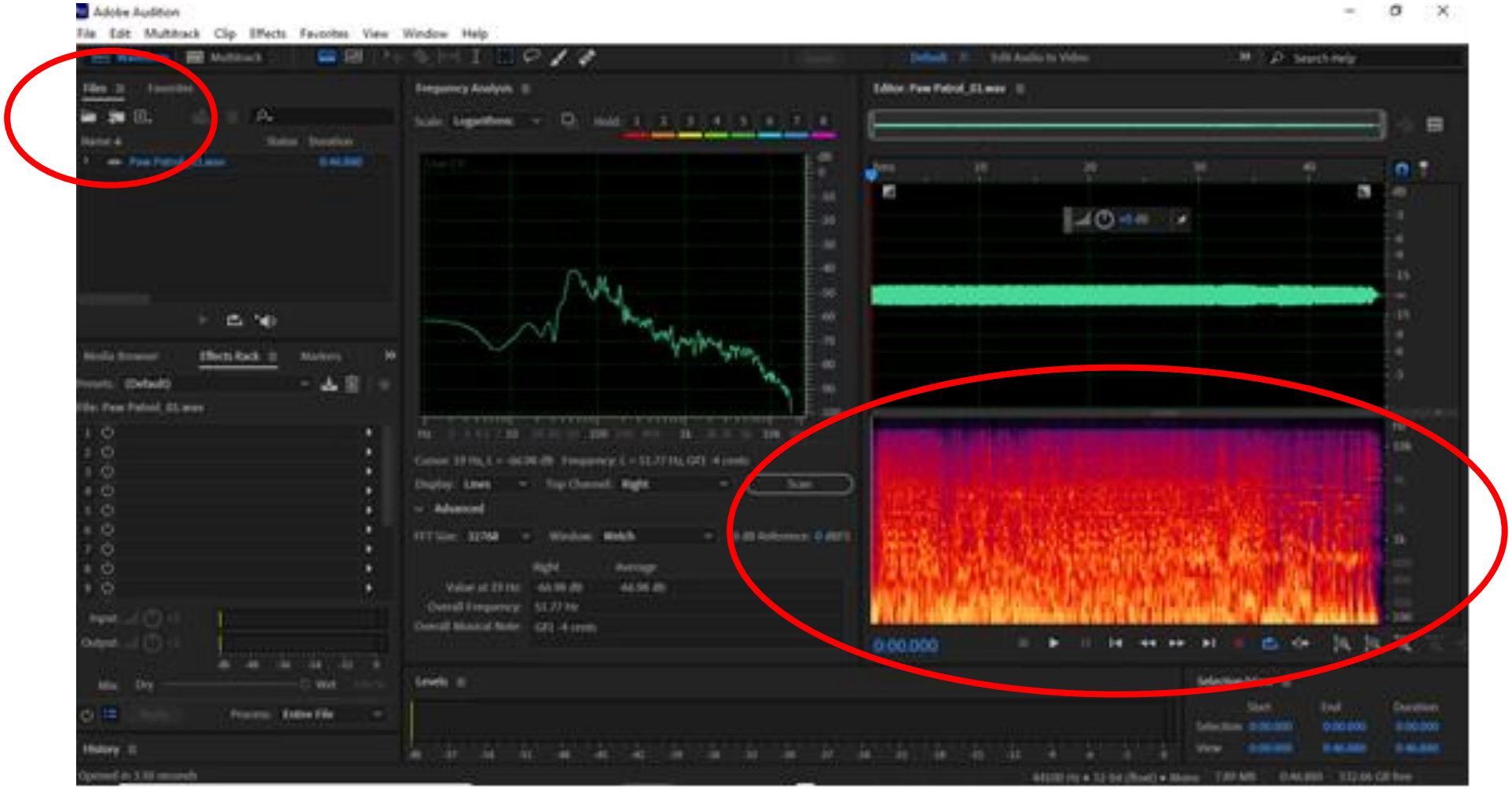

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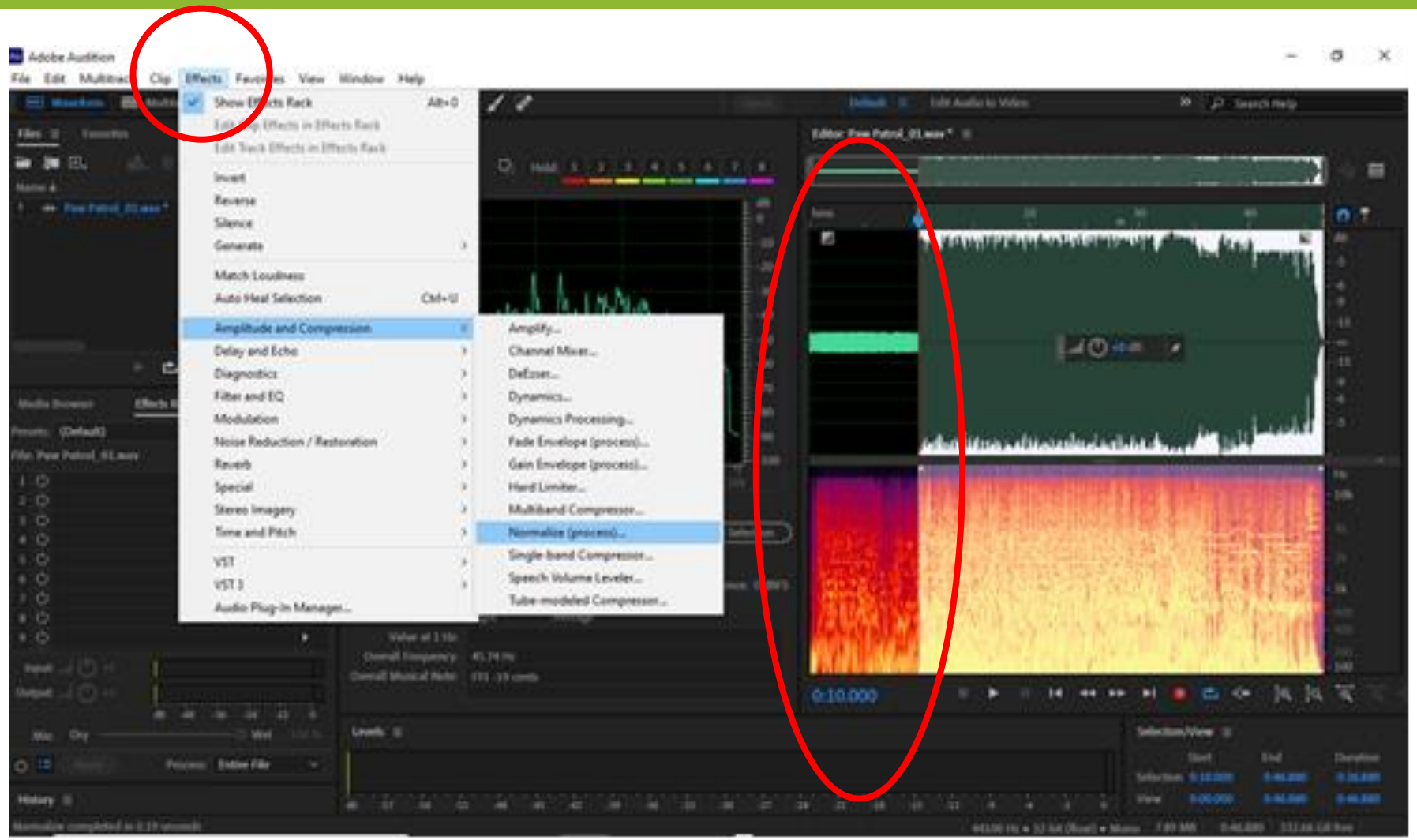

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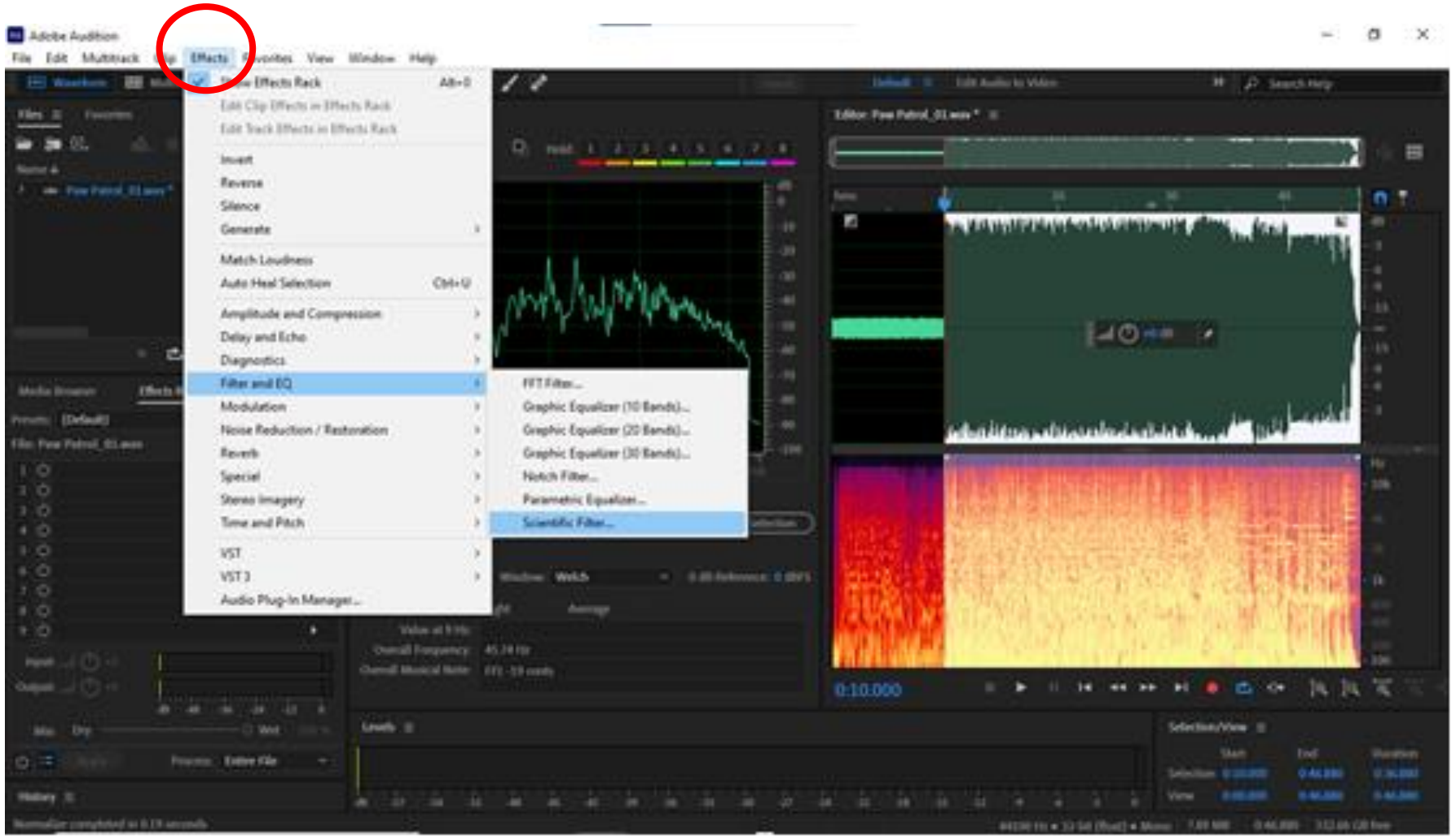

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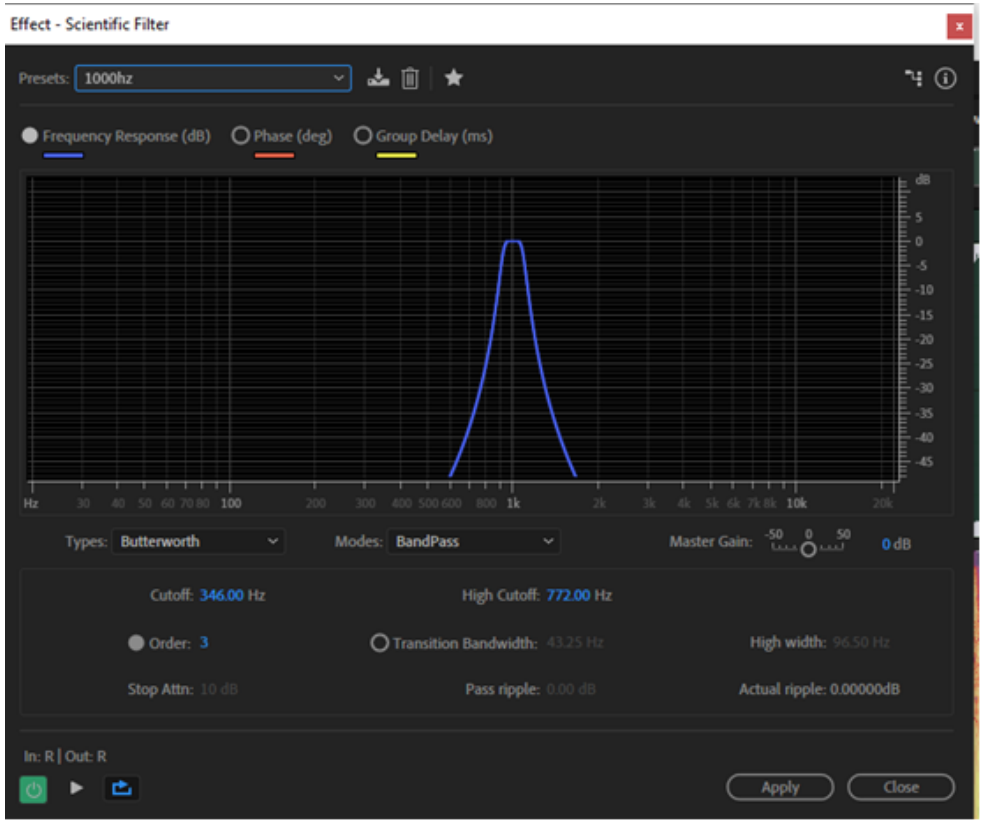

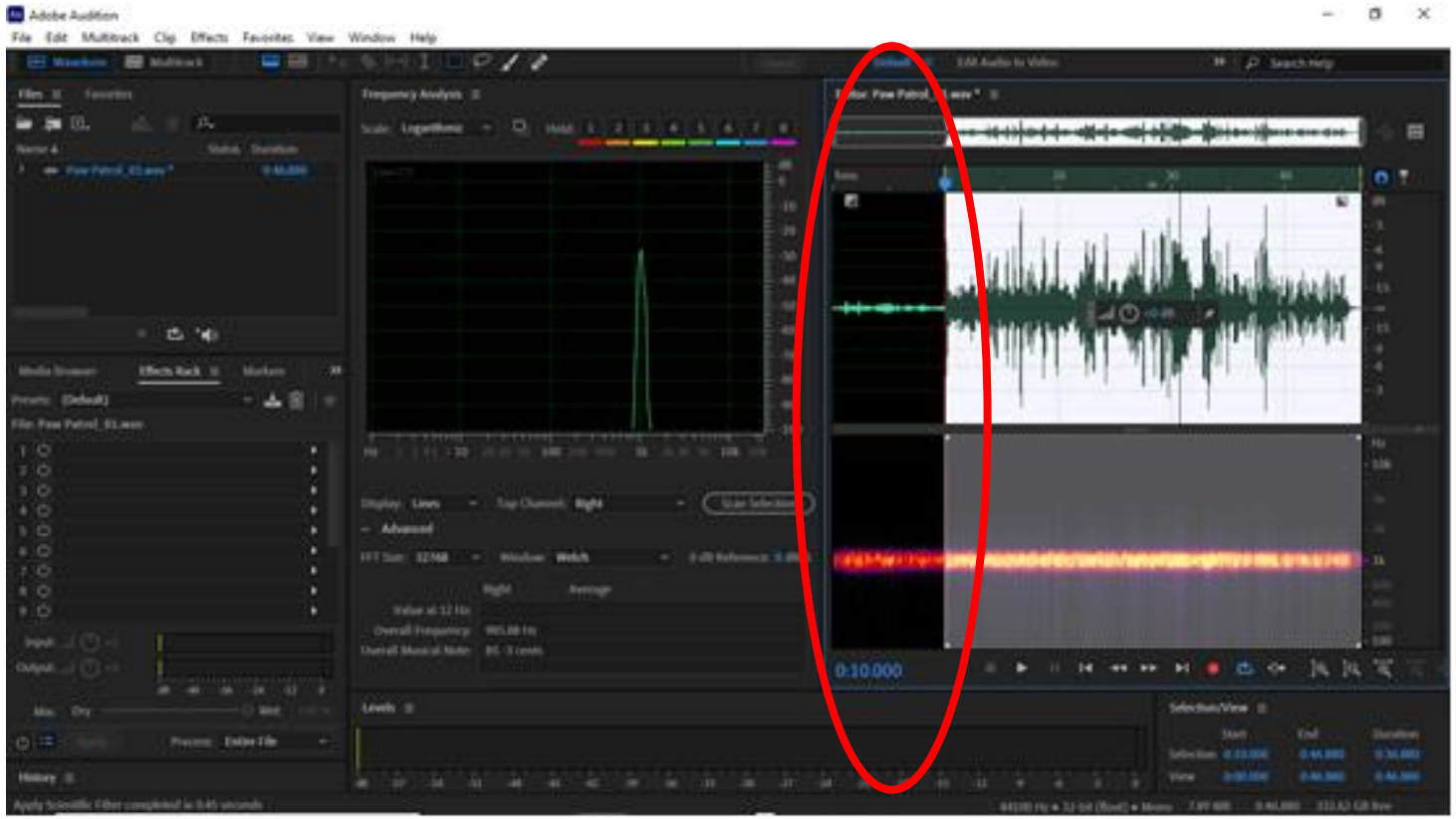

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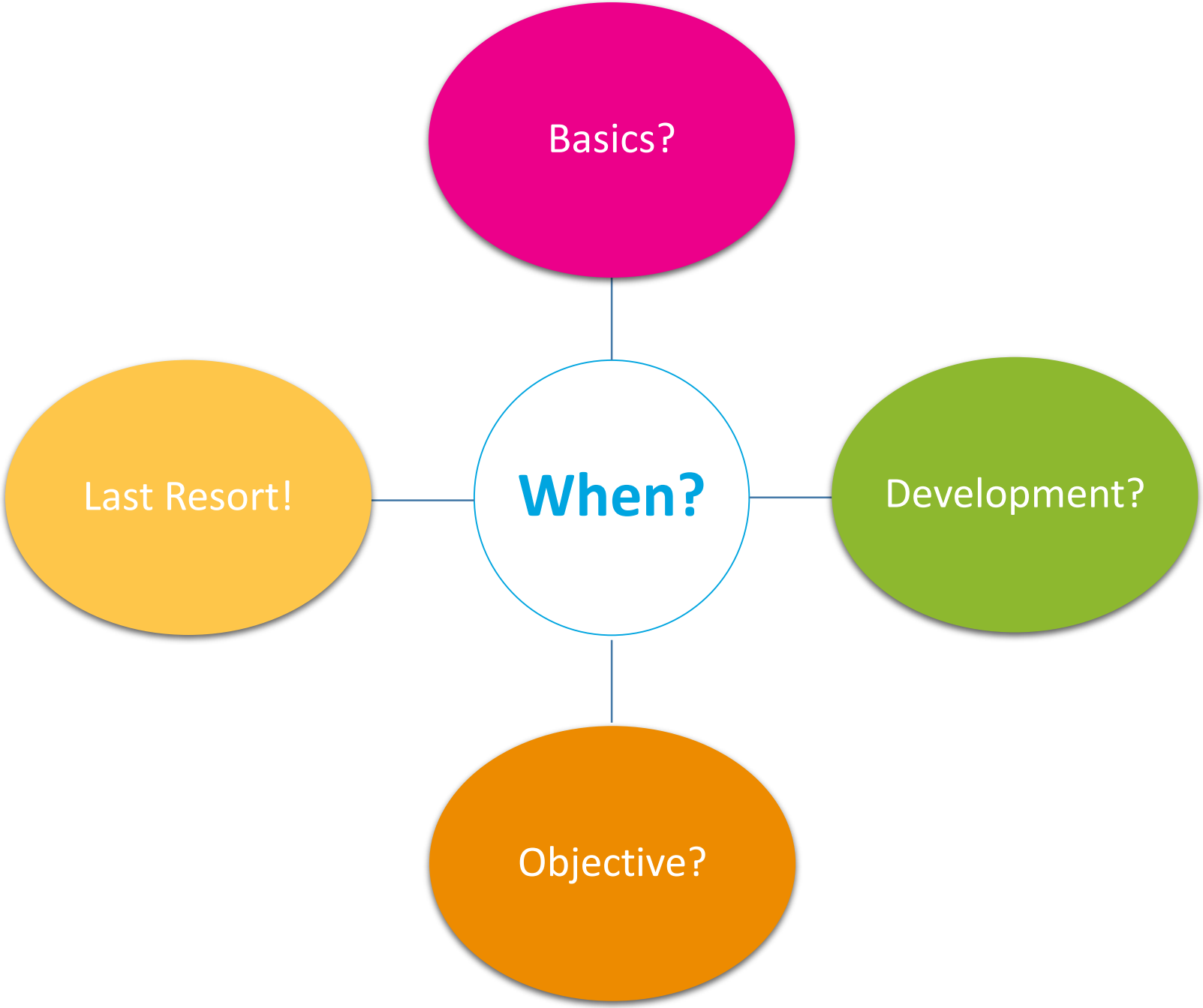

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How?

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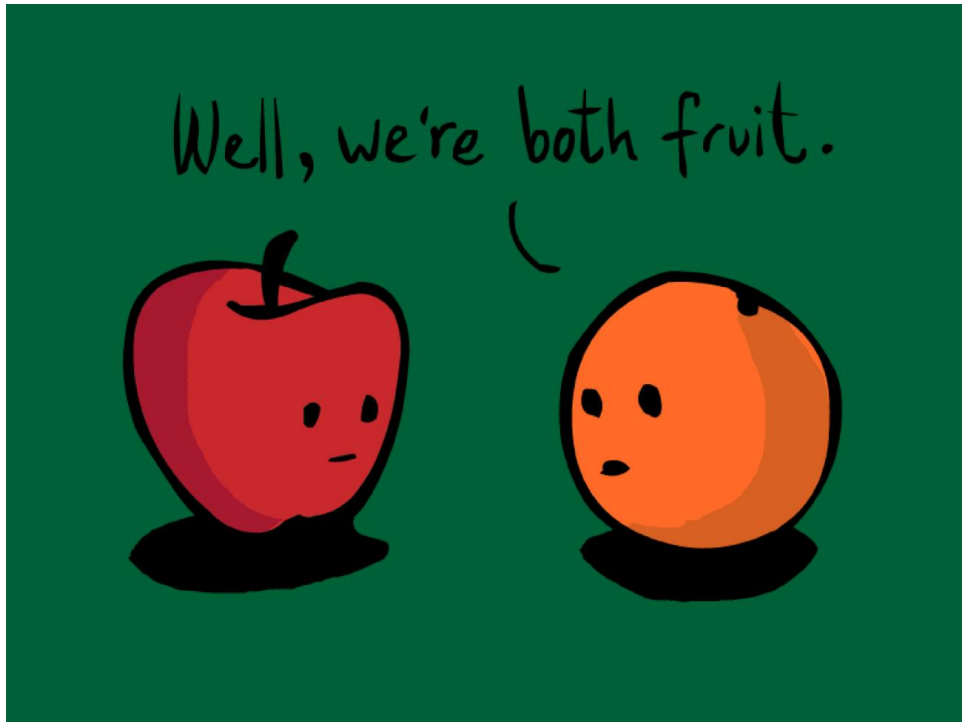
How – Common Pitfalls?

1. Hit play and see what happens?

2. Turn it up until something happens?

3. It’s all the same track, right?



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How – Stimuli Level?

SLM measurement is critical

Use a crib sheet

Report the range e.g. 40-45dBA

Capture the peak

Music File – Right **These are estimates, you must confirm levels via the SLM live during presentation or immediately after session**	≤30dBA	35-45dBA	45-55dBA
Peppa Pig BB	0	10	20
Peppa Pig 4kHz BPF	5	15	25
Baby Shark BB	0	10	25
Baby Shark 4kHz BPF	0	10	20
Wind the Bobbin BB	5	15	25
Wind the Bobbin 4kHz BPF	0	10	20

How – Discharging?

No s

Con

Obj

Join

Doc

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How – Reporting?

Result	Reporting
<30dBA Broadband Music	Able to detect broadband sounds at a very soft level in at least one ear In the absence of frequency specific information we cannot rule out hearing being the cause of the communication delay
<30dBA Broadband Music <30dBA 1+4 BPF Music	Able to detect mid and high frequency sounds at a very soft level in at least one ear Hearing is unlikely to be the cause of the communication delay
45-50dBA 2kHz BPF Music 50-55dBA 500Hz BPF Music Flat Tymps	Able to detect low and mid frequency stimuli at moderately elevated levels in at least one ear OME Can't rule put PCHI If persistent, this is likely to impact their communication development.

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How – Case Study 1

Multiple medical diagnoses inc craniofacial

Responses at raised levels

Assumed OME = BCHA

ABR under GA + Tymps confirmed permenant CHL

Revised working diagnosis, but looking in the right direction

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How – Case Study 2

Previous ABR confirmed PCHI

Very challenging to test behaviourally + parents initially not engaged

HA adjustments made based on aided testing

Improvement in fitting and parent engagement

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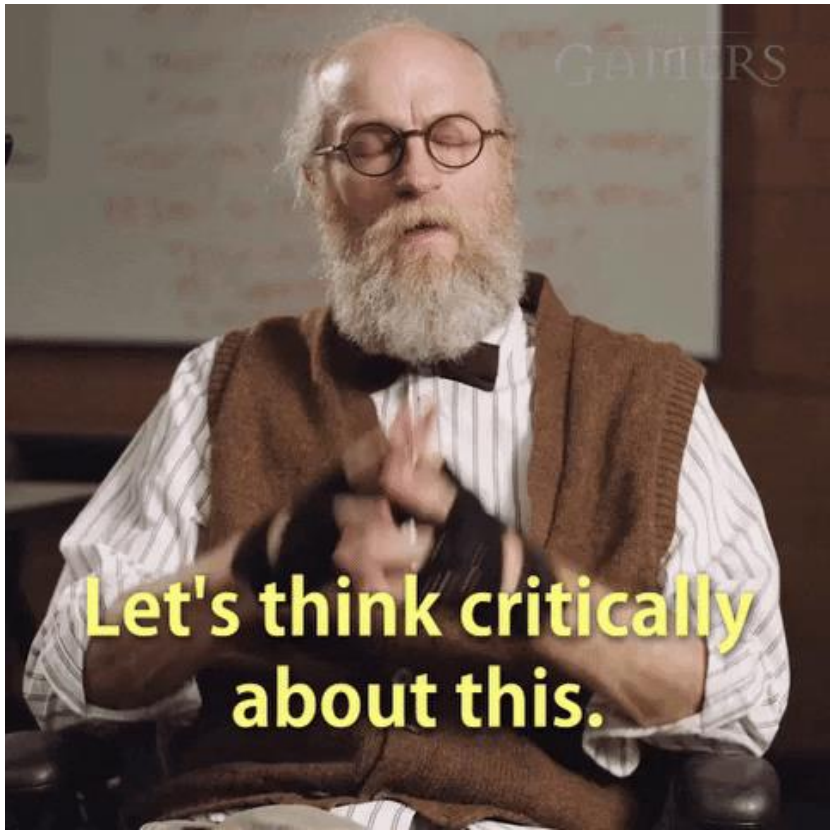
Think Like a Scientist!

Non-standard stimuli carries a risk

Critically appraise our results

Getting this wrong is worse than getting nothing at all

Suspect a hearing loss until proven otherwise!



Electrophysiology is key!

Behavioural testing not appropriate for all

Utilise all of the resources available e.g. OAE, ABR, ASSR

Work with the MDT to establish sedation/GA ABR pathways

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thank you

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