

Hearing Solutions SIG

September Meeting Notes

“What you don’t know about how hearing aids
should be fitted”

(but you will know when we are done today?)

- By Jerry Kupperman, Ph.D.
 - Audiologist (Retired)
- Hearing SIG September 22, 2016

Out of date method

- Can you hear me know?
- Or
- Can you hear me better now?

**WRONG
QUESTIONS**

What is the...

**RIGHT
QUESTION?**

**Can you hear me as
BEST as you
possibly can?**

You don't know the answer to the question because **you** don't know what you should be hearing. You don't know what you are missing. (You missed it.)

Goal is to insure that you have the **best possible** hearing out of your hearing aids, not just "better than before"

- Without a scientific approach, the hearing aid fitter can only ask you, the impaired client:
“How does that sound?”

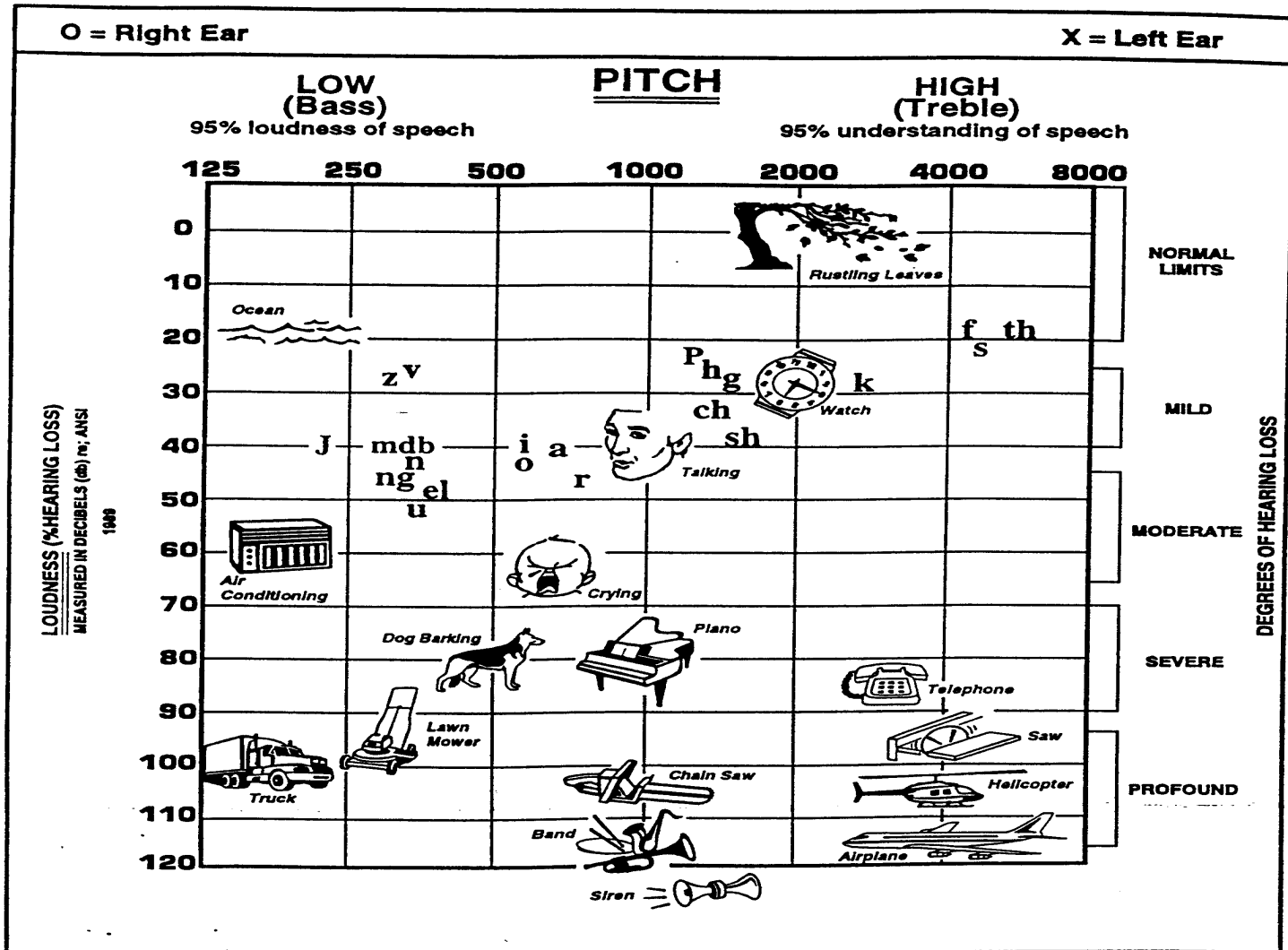
- But you have not heard normally for at least 10 years.
- Sure it sounds better.
- But there is NO way of YOU knowing if it sounds the way it should.

“BEST : is the goal, not “better”

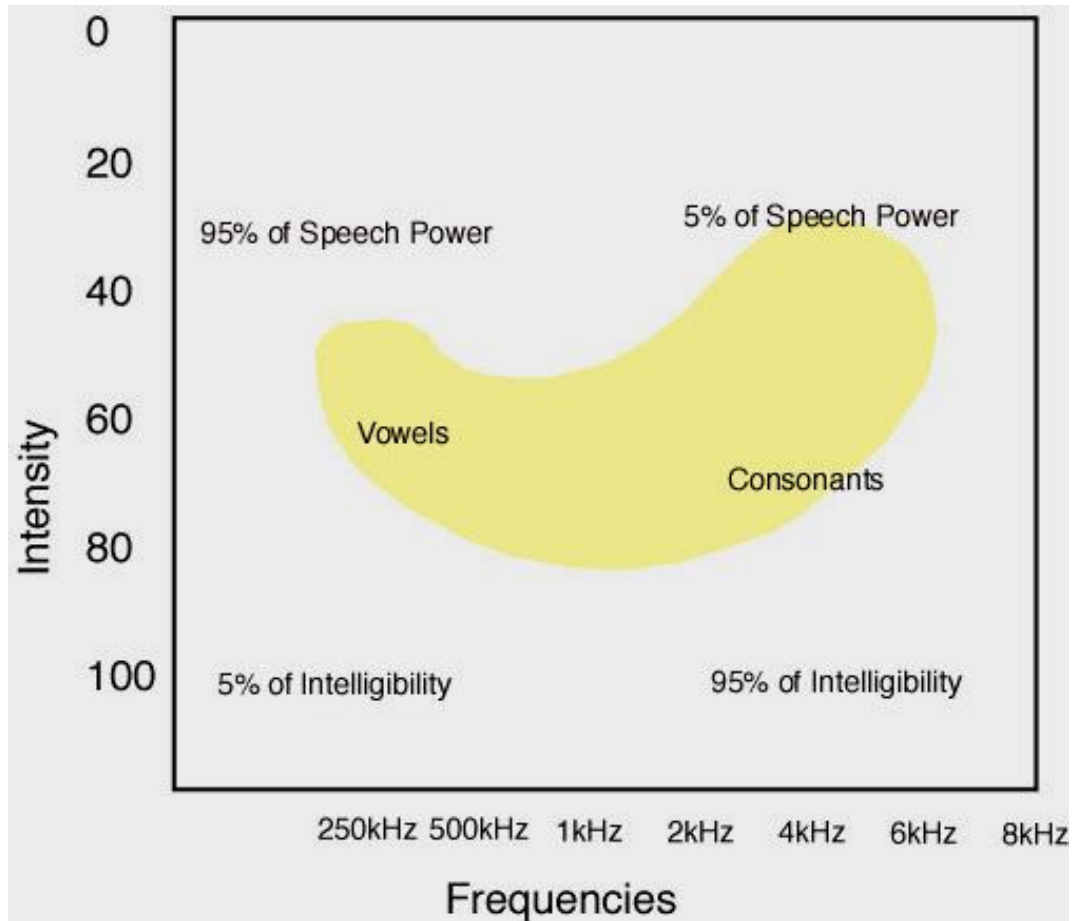
Reality check

- Normal hearing people do NOT hear everything
- The vast majority of hearing impaired people can benefit from properly fit hearing aids
- Unfortunately, for some people the benefits are limited or NO benefit is possible. (Small number)

Normal Speech and Other Sounds

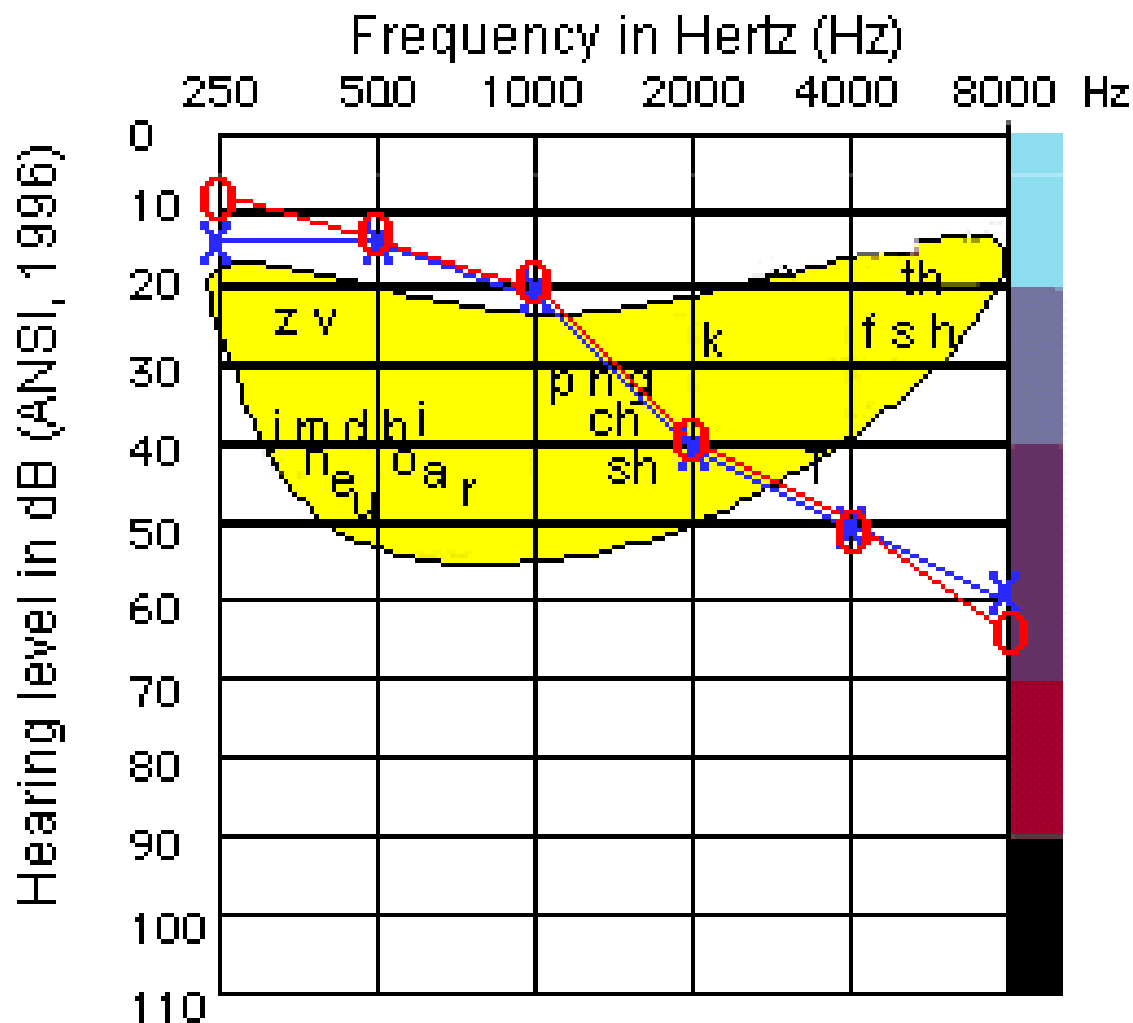


Audiogram



I can hear but I cannot understand

AUDIOGRAM



Real Ear Measures

- Been around for 30-40 years







Finding the right sounds patter, known as the TARGET

- Manufacturers have tested thousands of people with every pattern of hearing loss.
- They know what the AVERAGE person with any pattern of loss LIKES AND WANTS TO HEAR. This provides MAXIMUM benefit (at least theoretically)
- The idealized result becomes the TARGET.
- Probe microphone measures help MATCH you to that target.

Old System leads to failure

- A fitter who does **not** use the probe mic technique does the following:
- Does your hearing test
- Puts that test results into their computer
- The computer spits out a “**quick fit**”
- This system does not take in to account **YOUR** ear canal, which will change how the hearing aid works in **YOUR** ear.

- Quick fits do not match the target, how often???

ANSWER

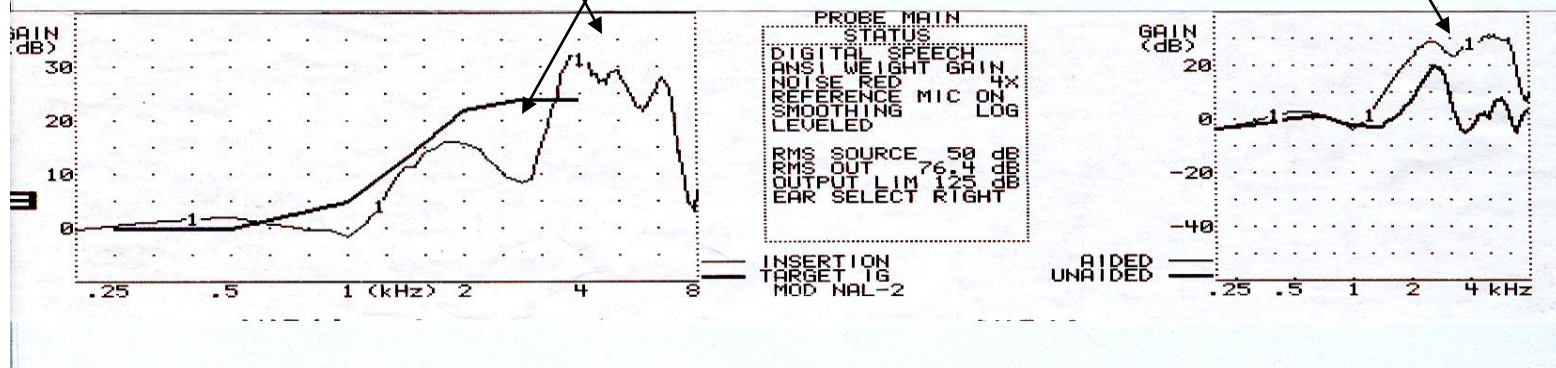
- **Over 95% of the time**

- And that is why you do not get the **MAXIMUM** benefit from hearing aids.

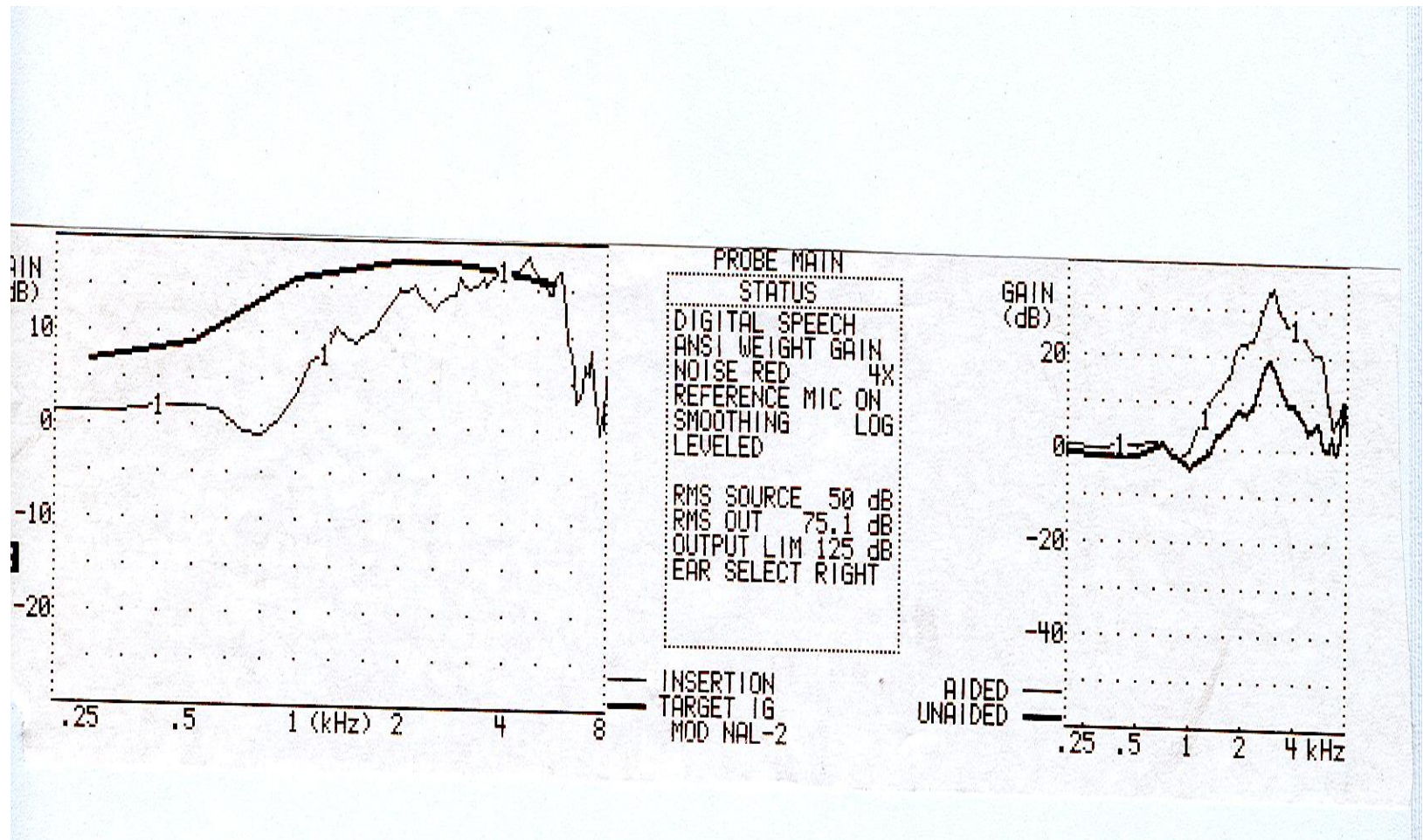
QUICK FIT

OVERSHOOT IN HIGHS AND DEFICITE AT 3000 Hz

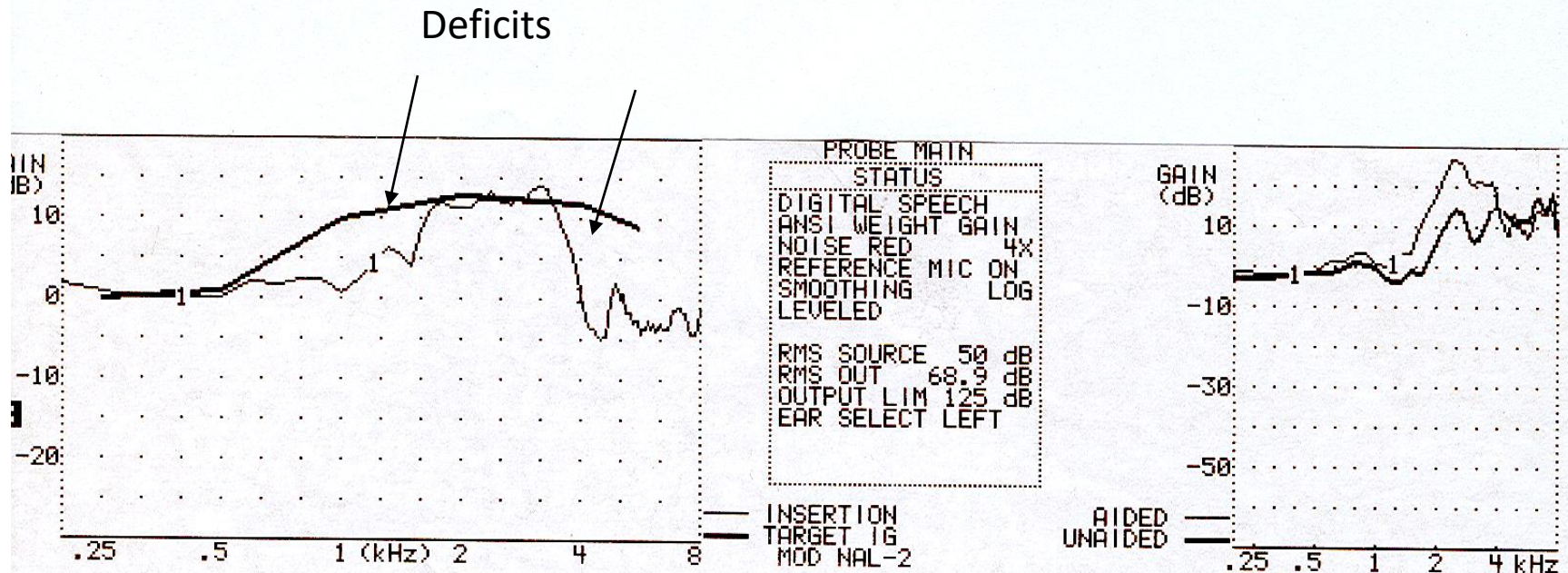
NOTE PATTERN



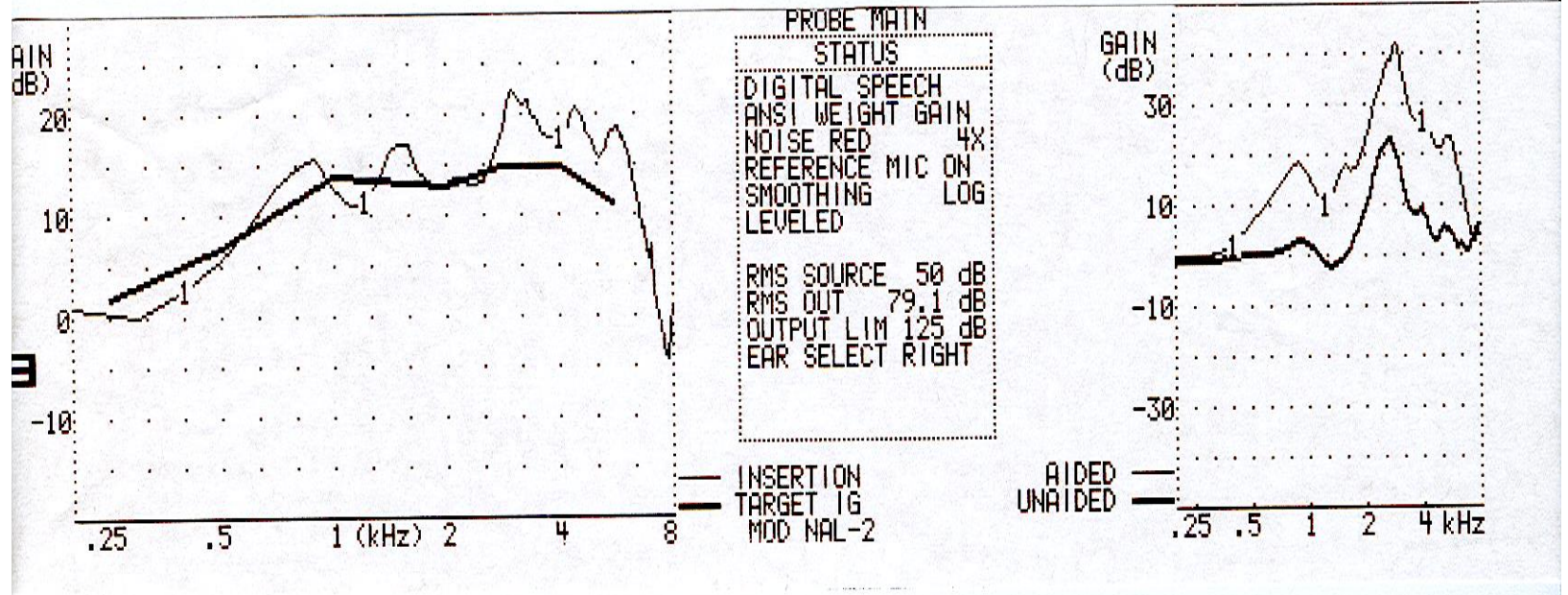
WEAK IN LOW AND MID RANGE



ON TARGET BETWEEN 1800 AND 3500 HZ

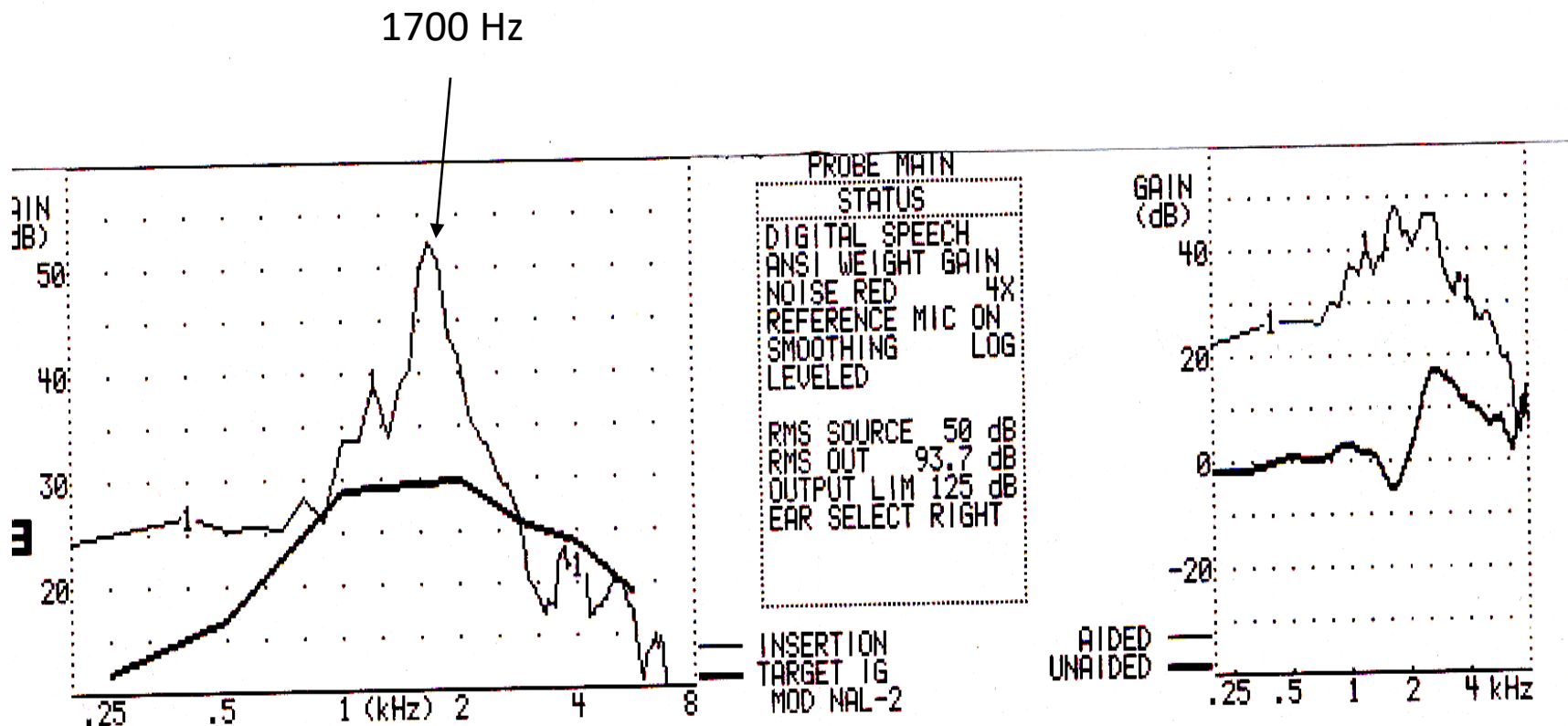


TOO STRONG IN HIGHS

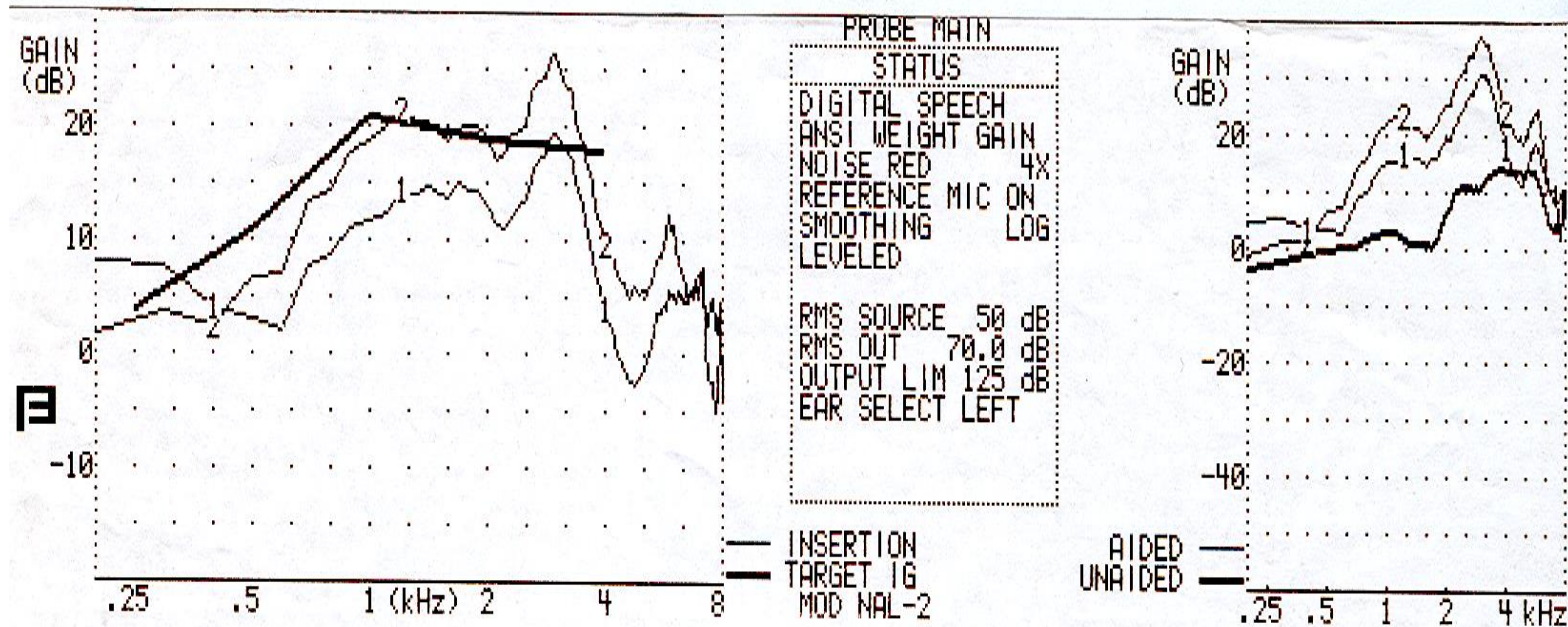


FEEDBACK

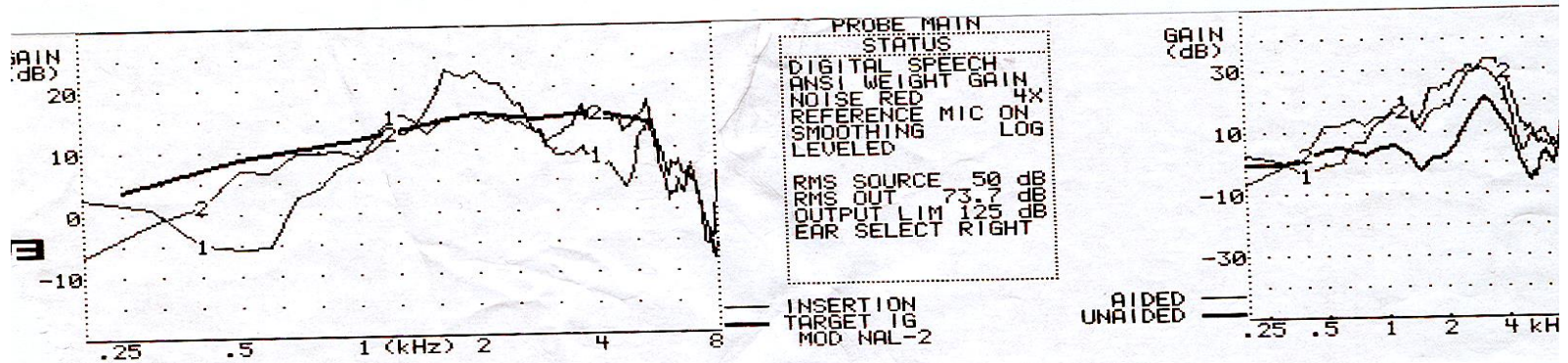
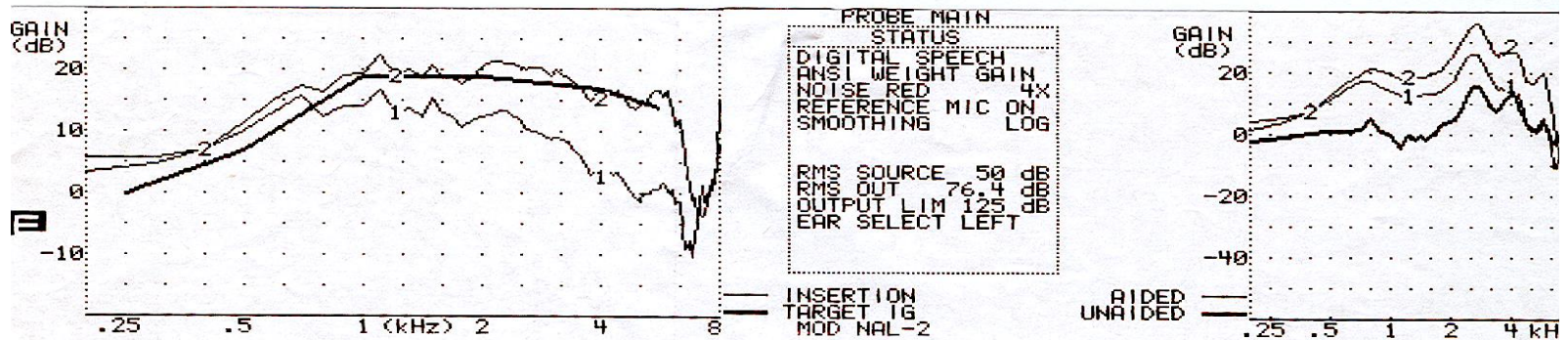
NOT ALWAYS A HIGH FREQUENCY TONE

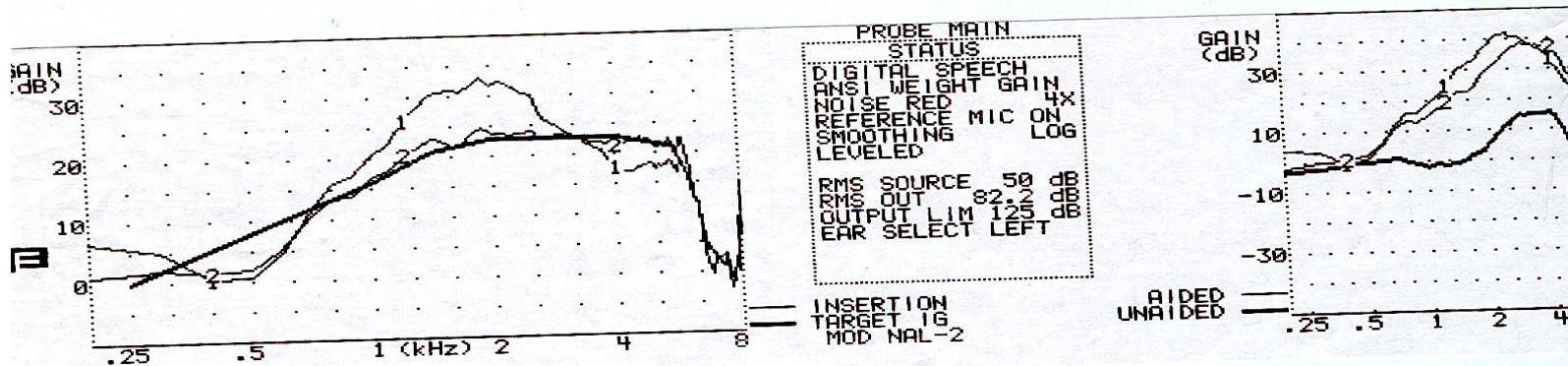
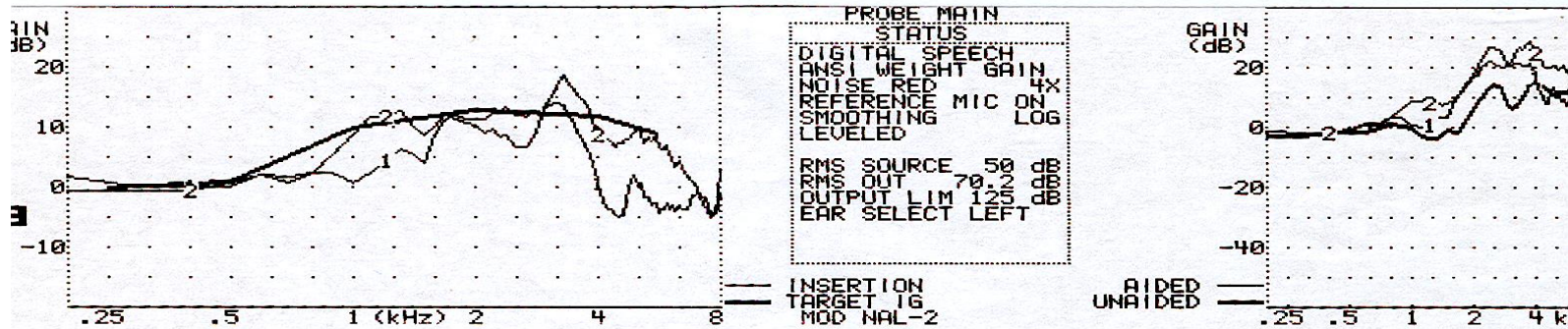


First fit (1) versus final fit (2)



First fit (1) versus final fit (2)



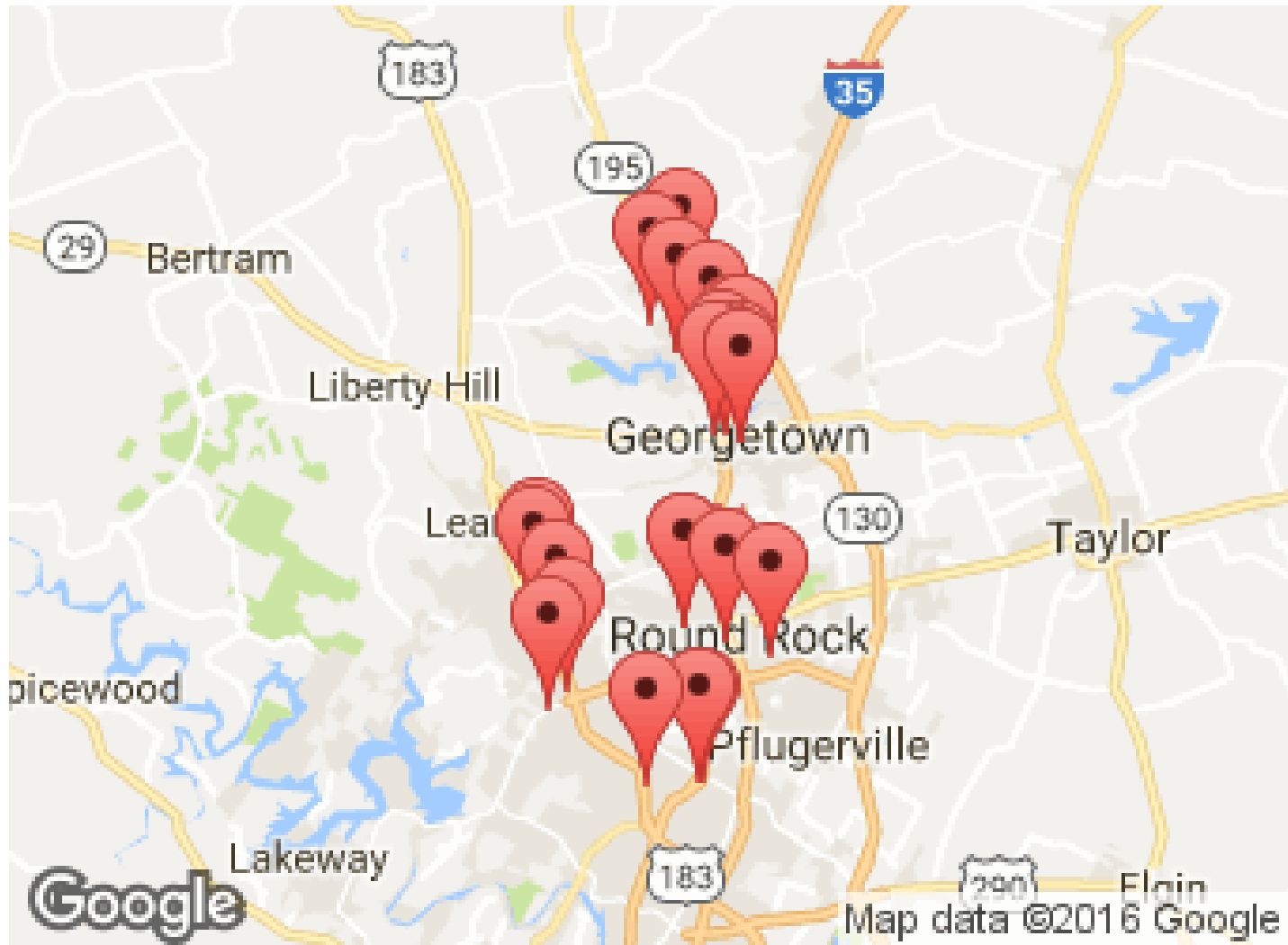


SUMMARY

- You cannot count on the accuracy of the manufacturer's first (quick) fit.
- Using probe mic measures provides enormous information about many aspects of the fitting.
- With out probe mic measures, your provider is just guessing

- What type of service provider is best able to provide you with a SCIENTIFIC approach to the fitting of your hearing aids?
- An audiologist or a hearing instrument specialist

Hearing aid providers near Gtown (19)



Texas hearing instrument specialist credential requirements

State Committee of Examiners in the Fitting and Dispensing of Hearing

Chapter 402

- **Initial Licensure requirements**
- have attained the age of majority
- have graduated from an accredited high school or equivalent
- have passed a written and practical exam given by this committee
- Test of **minimal** competence

Texas audiology license, Chapter 402

- **Initial Licensure requirements**
- **Audiology**
- **Doctoral degree** required from a program accredited by a national accrediting organization that is approved by the Board and recognized by the U.S. Secretary of Education in an accredited or approved college or university;
- This is a 3 year GRADUATE TRAINING PROGRAM
- Passage of an examination.
- Criminal background check.
- All applicants must submit proof of successful completion of the jurisprudence examination at the time of application. The jurisprudence examination must be completed no more than six months prior to the date of licensure application.

Texas audiology license requirements (continued)

An intern license is required before beginning the **supervised professional experience**; an audiology intern may fit and dispense hearing instruments under supervision; audiology internship shall consist of **1,600 hours of supervised clinical work**; supervisors shall have a valid Texas license and practiced for at least three years.

- Decide for your self who is best qualified to be your service provider
- When you set up your appointment, ask on the phone is the person an audiologist or hearing instrument specialists.
- Ask if they routinely use probe microphone measures (some audiologists do NOT)