Acoustic Transparency Comparisons of Hearing Aid Retention Accessories

RESP 50 - volume control taped so it remains stable throughout evaluation								
Set-up of hearing aid with retention accessory	200	250	315	400	500	630	800	1000
Hearing aid only	63	65	71	72	75	79	84	90
Hearing aid on false ear (pinna effect)	64	68	70	73	75	78	82	90
Hearing aid on false ear with Ear Gear	61	67	70	72	76	79	83	89
Hearing aid on false ear with Hanna Andersson cap	63	67	70	73	75	78	82	91
Hearing aid on false ear with Silkawear cap	63	67	70	73	75	78	82	91
Hearing aid on false ear with Hearing Henry headband	63	67	70	69	74	79	82	86

Set-up of hearing aid with retention accessory	1250	1600	2000	2500	3150	4000	5000	6300
Hearing aid only	99	93	87	87	86	83	74	55
Hearing aid on false ear (pinna effect)	99	94	91	95	91	85	75	56
Hearing aid on false ear with Ear Gear	98	91	88	93	89	83	73	54
Hearing aid on false ear with Hanna Andersson cap	100	96	93	95	93	88	79	56
Hearing aid on false ear with Silkawear cap	100	96	93	95	93	88	79	56
Hearing aid on false ear with Hearing Henry headband	91	84	79	84	88	79	68	48

GAIN IN dB				
Set-up of hearing aid with retention accessory	Average OSPL90	Average gain@50	Average gain@60	Frequency Range
Hearing aid only	109	30	30	300-5600
Hearing aid on false ear (pinna effect)	109	32	33	375-5600
Hearing aid on false ear with Ear Gear	109	31	31	315-5340
Hearing aid on false ear with Hanna Andersson cap	109	34	34	420-5600
Hearing aid on false ear with Silkawear cap	109	34	34	420-5600
Hearing aid on false ear with Hearing Henry headband	108	24	24	200-5340

HARMONIC DISTORTION			
Set-up of hearing aid with retention accessory	500 Hz	800 Hz	1600 Hz
Hearing aid only	2	1	2
Hearing aid on false ear (pinna effect)	3	2	2
Hearing aid on false ear with Ear Gear	3	1	1
Hearing aid on false ear with Hanna Andersson cap	2	1	1
Hearing aid on false ear with Silkawear cap	2	1	1
Hearing aid on false ear with Hearing Henry headband	2	1	2

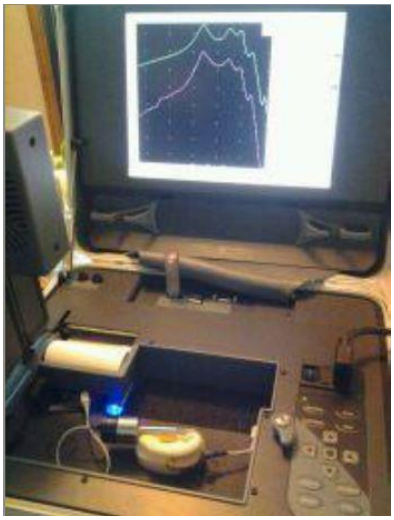
Phonak Piconet2 (P2AZ) hearing aid used for assessment. Set volume backed off slightly from full on and taped into position.

Refer to next page for photos of acoustic transparency assessment set up.

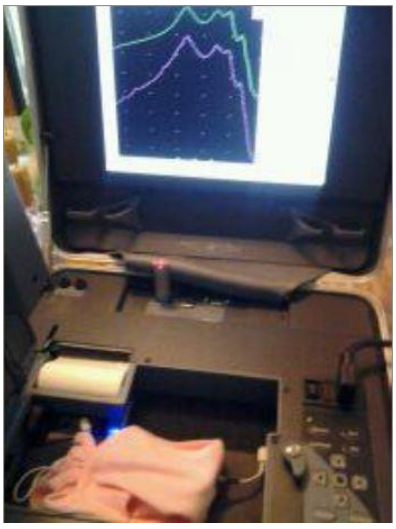
Performed October 2013 by Vickie Anderson, AuD and Karen Anderson, PhD using an AudioScan electroacoustic hearing aid analyzer.

Acoustic Transparency Assessment of Hearing Aid Retention Accessories

Hearing aid on false ear (to account for pinna effect) with Ear Gear



Hearing aid covered by Silkawear cap and Hanna Andersson pilot cap



Hearing aid covered by Hearing Henry Headband