

Spec #	Source	Specification	Direction	Units of measure	Marginal	Ideal	Notes	DRI?	CHECKED?
S1	CN1	Lowest level of sound detected	min	dB			0 lowest range of normal hearing	EE	
S2	CN1	Frequencies amplified	max	Hz	300-3400	85-8000	marginal values are those used in radio, 85 is lowest male voice	EE	do we need a customer profile for this? can we make an educated guess if we cannot access Eddie/Gary frequency information before break? - ali
S3	CN1, CN6	Maximum amplification	target	dB		130	max considered safe	EE	should we have a limit? -ali
S4	CN5	Levels of volume adjustment	max	levels		>10	adjusted in steps or continuous	EE	volume control for protection? -ali
S5	CN7	Time to charge earpiece	min	minutes	<60	<30		EE	keep in mind when are they charging? if the intent is to wear all day and charge while you sleep... we could gain more charging time.... not sure if that helps - ali
S6	CN7	Time to charge transfer module	min	minutes	<120	<30		EE	
S7	CN7	Connects to standard USB 2.0 computer port	target				with adapter yes	EE	
S8	CN11, CN12, CN2, CN4,	Maximum temperature at outside surface of device	min	oF	<110	<98		MEEE	Ali - MEs cannot review without EE approval and component selection. depends on electronics - when we have a better idea of temp we can do a material (ME) and heat analysis (ME) - ALI
S9	CN11, CN4, CN6,	Range of adult ear size accommodated	max	percentile	25th to 75th	10th to 90th		ISE	Using 5% Female to 95% Male Percentile
S10	CN10, CN11	Weight of earpiece	min	g		<12	marginal values will depend on ergonomic info	ISE	Ali - should we compare to other models? Yes,
S11	CN4, CN6, CN10, CN11	Weight of transfer module Earpiece battery life at maximum amplification	min	g		<8	marginal values will depend on ergonomic info *may not be applicable	ISE	
S12	CN8	Angle head can tip without the earpiece falling off (any direction)	max	hours	>16	>48		EE	
S13	CN4, CN11	Earpiece stays in place during impact/vibration (from running)	max	degrees	>90	>135		ISE	
S14	CN4, CN11	Percent of surveyed people who identify a picture of the device as something other than a hearing aid.	max	percent	>60	>80	team should conduct surveys (at imagine RIT? thoughts?)	ISE	need to define this spec
S15	CN3	Percent of surveyed hard of hearing people who prefer the form of the new device to standard behind the ear hearing aids	max	percent	>60	>80	team should conduct surveys	ID	Nanxi- I think I would not be able to attend this activity because it's in the spring, sorry
S16	CN3	Percent of surveyed hearing people who would use the device for Bluetooth or music listening	max	percent	>50	>70	team should conduct surveys	ID	Nanxi- great thought
S17	CN3	Percent of surveyed people who feel the device is comfortable to wear	max	percent	>50	>70	team should conduct surveys	ID	Nanxi- agree Nanxi- I think for the comfortable degree the marginal should be slightly higher?
S18	CN11	Percent of surveyed people who feel the device is comfortable to wear	max	percent	>50	>70	team should conduct surveys	ID	Nanxi- hmm, from my knowledge it's quite hard to fit everyone's ear canal with standard ear plugs. They use ear molds because they have to block the sound in order to prevent echos, etc. Prefer decide after asking audiologist.
S19	CN9	Attaches to a standard ear tube and ear mold	binary		yes	yes	maybe should interview audiologist for final decision allows for expansion in subsequent projects without complete redesign of housing. ((may not be applicable for new design))	ID	Ali - I approve, product should conform to industry standards, should work with common earmold for hear dof hearing and hearing (ear plug? or headphone in the canal?) Ali - I vote to get rid of this...based on our last team meeting we were going to blend the user control of on,off and programs. therefore this toggle spec is irrelevant
S20	CN13	Additional toggle switch	binary		no	yes	not as important in first round of prototyping, but should be considered	ID	Nanxi- agree
S21	CN14	Manufactured cost (estimated)	min	\$	<2000	<1000		ISE	Ali - I approve this, CN14 is that the price is similar to current devices. I can benchmark prices specifically to verify this spec
S22	CN15	Communicates by Bluetooth to cell phone or music player	binary		No	Yes	Optional, delete if necessary	EE	
S23	CN16	Noise cancellation abilities	binary		No	Yes	Optional, delete if necessary	EE	