

Spectral iQ—A Frequency Lowering Strategy

Product Availability:

3 Series, Xino Wireless, Xino Tinnitus, Wi Series, X Series, Tour, Ignite Wireless and Ignite

Spectral iQ Adjustments

1. Click on **Spectral iQ** on the left navigation bar
2. Spectral iQ default on or off based on the patient's audiogram
3. **Bandwidth** adjusts the Source and Target regions to maximize speech clarity
4. **Gain** adjusts the amplification of the recreated cues to maximize audibility
5. The **Audiogram** in dB SPL may be displayed via Audiogram checkbox
6. **Expert Assistant** accessed via the left navigation bar includes additional fine tuning assistance
7. Click on the **Memory Tabs** to enable or disable Spectral iQ per memory



Spectral iQ in Inspire

- **Bandwidth** offers 7 settings
- **Source Region** represents the frequencies which will be recreated
- **Target Region** represents the area in which recreated cues will be presented
- **Dotted Line** represents the bandwidth limits of Spectral iQ
- **Over all hearing aid gain is adjusted via QuickFit and/or Fine Tuning**

Spectral iQ Verification

1. With Spectral iQ Off, use a Plurality Word List (available on page 2) to obtain patient's score
2. Present words while masking lipreading cues
3. Ask patient to repeat the words and track correct words
4. Calculate the patients score in percent correct
5. With Spectral iQ On, use an alternate Plurality Word List to obtain the patient's score
6. Repeat steps 2 – 4
7. Compare patient scores:
 - a. Patient scores at least 50% with Spectral iQ on, setting is appropriate; no further adjustment is necessary
 - b. Patient scores less than 50% with Spectral iQ on, proceed with Step 8
8. If 50% is not achieved after two Gain increases, return Gain Setting to 3 and increase Bandwidth in 1 Step increments
9. Repeat steps 8, alternating raising gain and bandwidth as described above until 50% correct is achieved

Plurality Word Lists

List 1	List 2	List 3	List 4
Key	Pets	Keys	Pet
Days	Cats	Day	Cat
Plays	Door	Play	Doors
Toys	Books	Toy	Book
Guns	Boys	Gun	Boy
City	Babies	Cities	Baby
Skies	Lady	Sky	Ladies
Cloud	Eye	Clouds	Eye
Ways	Ears	Way	Ear
Dog	Toes	Dogs	Toe

/s/ and /sh/ Word Lists

Sunshine
Seashells
Seashore OR
She sells seashells by the seashore by the seashore in the sunshine.

Some patients may not reach 50% correct, even with Spectral iQ enabled. Consider enabling the feature in Memory 2 and reassess performance on the Plurality Test at the follow-up fitting.

Spectral iQ Fitting Adjustment Guide

1. Whole words should be used as some lisping may be evident when /s/ and /sh/ are produced in isolation
2. If processing is too aggressive, distortion via a lisp or echo for vowel sounds or whole words may be reported

	Patient Report	Adjustment	Other Considerations
Own Voice	Own voice sounds like static or echo	Decrease Gain Setting Decrease Bandwidth Setting	Adjust gain setting first If reports persists, adjust Bandwidth setting
Intelligibility	/s/ sounds are too lispy	Decrease Gain Setting	
	/s/ sounds are too unnatural	Decrease Bandwidth Setting	
	Lisping is too distracting (occurring on every word or with vowel sounds)	Decrease Bandwidth Setting	
	Difficulty detecting /s/ sounds or identifying plural sounds	Increase Gain Setting Increase Bandwidth Setting	Adjust Gain setting first If report persists, adjust Bandwidth setting
	Other voices echo	Decrease Bandwidth Setting Decrease Gain Setting	Adjust Bandwidth first If report persists, adjust Gain setting
Sound Quality	Echo or lisp artifacts Processing too noticeable	Decrease Bandwidth Setting Decrease Gain Setting	Alternately decrease Bandwidth and Gain until issue is resolved