

## Troubleshooting

### Tinny quality or high frequency tinnitus

The reintroduction of high frequencies with electrical stimulation after a period of deafness may result in perceptions described like tinnitus. This perception usually dissipates after an adjustment period wearing HiRes. Try the following to reduce the perception of tinnitus:

- Taper off the high frequency gains starting on the last 4 electrodes. Gradually increase high frequency gains over the first week or two of device use; often the issue will resolve.
- Decrease basal M levels (last 4 electrodes).
- Set the T level of the last 4 electrodes to 0.
- Reduce the M level on the last electrode to 0 or set clipping to 0. Gradually increase level over the first few weeks of device use.
- Disable the most basal electrode (resulting in frequency allocation over the remaining electrodes) in Live Speech.

### Isolating a single electrode problem

It may be necessary to assess perception on individual electrodes using single electrode tone burst stimulation such as in cases of somatic responses or "odd" percepts.

- Select Tone Bursts instead of Speech Bursts. Tone Bursts are presented on a single electrode.
- Tone bursts, at very narrow pulse widths, often require higher stimulation levels to achieve M level. Be cautious and remember to turn down the M levels globally or reduce volume control before returning to Live Speech stimulation.
- Turn off electrodes based on any perceptual issues. Adjust levels as needed and save as a new program.

### Facial Nerve Stimulation (FNS)

Typically, FNS presents during live speech stimulation. Therefore in SoundWave, we recommend you begin managing FNS in Live Speech. Try the following to minimize or eliminate FNS:

- Try clipping electrodes at M level, then remove the clipping one electrode at a time to isolate electrode specific issues.
- Turning off a electrode contributing to FNS may be beneficial in some cases. The frequency filter assignments will be automatically reallocated across the remaining electrodes. You may compare the benefits of leaving a electrode in with clipping levels well below M or turning the electrode off.
- If FNS is elicited before a comfortably loud level of stimulation can be reached, you can disable the automatic pulse width algorithm (in the Options window) and manually double the pulse width (e.g. if you are currently at 10.8 uS increase to 22 uS). Constant charge CUs allow for adjustment in PW without re-measurement of psychophysical levels. Adjust levels as need in live speech. If FNS persists, repeat a doubling of pulse width.

### Echo

Evaluate the following to reduce the perception of an echo:

1. Try standard instead of extended filters.
2. Try reducing the gain of the apical electrodes (1-3).
3. Try reducing the gain of the basal electrodes (13-16).
4. Try reducing M levels globally.
5. Reduce M levels significantly on the apical (1-3) electrodes. Try reducing electrode 1 by approximately 1/3, and then reduce 2 and 3 slightly less.  
*Note: After the reduction of M levels on the apical three electrodes, patient may report an overall decrease in loudness. Try either globally increasing all M levels or adjusting gains.*
6. Try reducing M levels on basal electrodes (13-16).
7. Create a new program in Live Speech, globally increasing all M levels (flat M) with processor at user settings for volume and sensitivity.
8. Create a program with every other electrode turned off.

## Managing Electrodes with the Short Cut Menu

Disable Electrode  
Enable Clipping

Use the short-cut menu that displays when you right click on a electrode. Allows you to:  
Disable/Enable electrodes.  
Disable/Enable clipping.

*Note: You must have a minimum of three electrode pairs enabled to use Fidelity 120.*

## Managing Electrode Shorts/Opens



Yellow - Open (electrodes are automatically disabled)

Purple - Short (can be manually disabled)

Green - Normal Impedance

Contact Advanced Bionics support for programming assistance.