

Sequel Fitting Reference Guide

Sequel Digital Signal Processor

1. Initial Fitting Procedures:

Enter patient information into the Standalone PFS (Standard ProHear) or NOAH database. Enter audiometric thresholds minimally at 500, 1000, 2000, and 4000 Hz.

2. Launch Hearing Aid Fitting Module & Read:

From the PFS Module Launchpad, double click on the Hearing Aid Fitting button to launch the Hearing Aid Fitting Module.



Select Binaural, Left Ear, or Right Ear. Click **Read** to establish communication with the hearing aid(s).



Click **Best Fit** to optimally adjust the programmable parameters to approximate the targets for the selected fitting formula. Best Fit buttons can be found in either the button panel in the center of the screen, or in the toolbar.



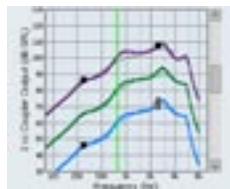
Note: Once the hearing aid is read, the volume control on the hearing aid will be disabled until the device is disconnected from the programming cable. Volume adjustments may be made within the software during programming.

3. Fine Tuning:

There are three ways to fine tune Sequel Digital:

- 1) Drag and drop the curves of the fitting graph,
- 2) Adjust the controls on the control panel, or
- 3) Utilize the **Expert Assistant** fitting tool.

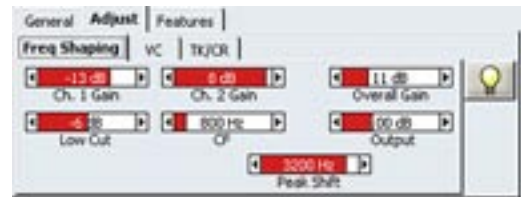
• **Drag and drop the curves of the fitting graph** from either the General or Adjust tabs. Adjustments may be made by clicking and dragging a point within a channel or by dragging the crossover frequency line. Using the drag and drop function may ultimately adjust the gain, output and compression characteristics.



• **Adjust the controls** on the control panel. Access the Frequency Shaping, Volume Control and Kneepoint/Compression Ratio (TK/CR) sliders by click-

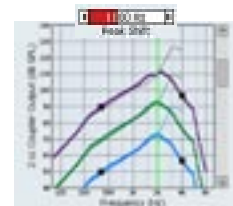
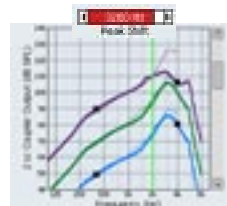
ing on the appropriate sub-tab of the Adjust tab.

- There are two ways to adjust the compression: Manually select the kneepoint and compression ratio via the TK/CR tab within Adjust or select a different fitting formula.



- Sequel Digital products incorporate a **Peak Shift** slider control, which can be used to move the resonant peak of the frequency response from 3200 Hz down to 600 Hz. The default setting is 3200 Hz. The Peak Shift feature is useful in the following cases:

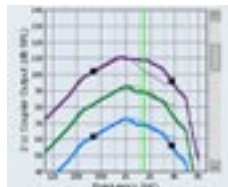
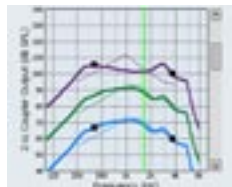
- It allows the bandwidth of the device to be limited for users with severe/profound high frequency hearing loss (thresholds are greater than 80 dB HL), as shown to the right, and for whom high frequency gain may be undesirable, unusable, and/or cause feedback. This functionality is shown below.



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- For unusual hearing loss configurations, such as a reverse slope, the Peak Shift control allows for more precise matching of Fitting Formula targets.



- The Peak Shift control also allows for more precise matching of the Real Ear Insertion Gain (REIG) target, by providing a closer match to the frequency of the user's ear canal resonance.

- Two sliders are available for making low frequency gain adjustments from the Frequency Shaping sub-tab of the Adjust tab. The Low Channel Gain slider will be automatically adjusted to provide the best match to the target during Best Fit. The Low Cut slider can be used to adjust the slope of the low frequency response, particularly below 500 Hz and in situations in which a high crossover frequency setting is used.

- **Expansion:** To adjust the amount of gain for very soft inputs (below the expansion/compression kneepoint), such as a refrigerator running or computer fan. Expansion may be set to On or Off by unchecking the Expansion Checkbox on the Expansion sub-tab. The default settings are On when any threshold is better than 40 dB HL and Off when all thresholds are poorer than 40 dB HL. This feature is adjustable per memory. Audio files are available to help determine the appropriate Expansion setting. Click on the Audio File Player button in the toolbar or select it from the Activity menu to use this fitting tool.

- **Precision Directional Imaging (PDI):** If fitting a Sequel PDI MultiMemory device, the Directional sub-tab will be available. Checking the Directional checkbox on the Directional subtab will activate a directional response for the selected memory. Additional frequency response adjustments are available with the Low Frequency Roll Off checkbox. For thresholds at 500 Hz better than 40 dB HL, the default setting is Full Low Frequency Roll Off. For thresholds at 500 Hz poorer than 40 dB HL, the default setting is

Partial Low Frequency Roll Off. The Full Roll Off option provides maximum reduction of the low frequencies, while the Partial Roll Off option offers increased gain to provide audibility for the low frequencies while in the directional mode. Unchecking the Low Frequency Roll Off checkbox will match the gain and frequency response of the directional and omnidirectional modes.



- Utilize the Expert Assistant tool, available on the Adjust tab. From the Expert Assistant window, select the patient's complaint (e.g., Tinny) and then click **Begin**. Follow the prompts within the window to complete the adjustment for the complaint.



4. Programmable Indicator Tones:

The Low Battery and MultiMemory beep tones are adjustable by selecting **Indicator Tones** from the Activity menu. Different frequencies and intensities are selectable for each tone. A tone can be disabled or a test tone can be presented through the hearing aid to verify audibility.

5. Program:

Click **Program**, either from the button panel in the center of the screen or from



the toolbar, to store programming information into the hearing aid. After programming the device, set the user volume control to the position indicated on the VC sub-tab of the Adjust Tab in order for programmed gain to be achieved.

Volume Control Position: 2/3