

# SADL

**version 1.0 for Windows**

**Satisfaction with Amplification in Daily Life**

For scoring and administering the SADL survey.



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## **The SADL Program**

The SADL (Satisfaction with Amplification in Daily Life) Scale is a 15-item self-assessment instrument for evaluating the satisfaction people feel with their hearing aid rehabilitation program. The survey produces a global satisfaction score and four different subscale scores: positive effect, service and cost, negative features, and personal image. This information can be used to gauge the level of satisfaction with current hearing aids relative to a normative group of experienced users, to evaluate a new hearing aid fitting, and to compare different hearing aids (old vs. new).

The SADL software program provides a way to administer the questionnaire using a computer, and/or an easy method for scoring questionnaires, and examining the results using a graphical output. The results might indicate problem areas that the clinician should address in counseling about amplification. Other uses for the data could be to track customer satisfaction or to monitor the overall success of a hearing aid fitting program.

### **SYSTEM REQUIREMENTS AND INSTALLATION**

The SADL program is a 16-bit Microsoft Windows®<sup>1</sup> application that can run on most systems with Microsoft Windows® version 3.1 or later. SADL for Windows needs at least 1 MB of hard disk space for the program and associated files. A laser printer is recommended for the best quality printouts of SADL data in graphical form but is not essential. A color printer will produce color graphics as on the screen graphs.

To install the software, run SETUP.EXE from the disk or directory that contains the SADL setup program.

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<sup>1</sup> Windows is a registered trademark of Microsoft Corporation.

## RUNNING THE PROGRAM

The SADL program opens displaying a blank Patient Information screen. At the top of the screen is the Main Menu bar. “File” and “Help” are pull-down menus of program options. To select a menu item either click on it with the mouse or press the Alt key and the underlined letter of the menu selection simultaneously. For example, <Alt+F> selects the “File” menu, while <Alt+A> selects “Save as...” in the “File” menu. To move about the menu levels, you can use the mouse or the cursor keys.

File contains the selections:

1. New
2. Load
3. Save
4. Save As
5. Exit (Alt + X)

Help contains the selections:

1. Contents
2. Using Help
3. About

Below the Main Menu bar is an icon toolbar for quick access to program functions. These include Create a new file, Open an existing file, Save the current file, Patient information, Dispenser-entered responses and Hearing Aid Info, Patient-entered responses, Display scores graphically, and Print data report. If the cursor pauses on one of these icons, a message will appear identifying the function of the particular icon. The Menu bar and the Toolbar are always available no matter what screen is displayed.

On any data entry screen, moving around the various fields is done with the mouse or with the Tab key. Moving within a field is done with the mouse or the cursor keys. Pressing a button is done by clicking on it with the mouse or pressing the Alt key and the underlined letter on the button. Throughout the remainder of these instructions, the Tab key will be referred to by <Tab>, the Enter key by <Enter>, etc. The combination of <Alt> plus the underlined letter of a command will be referred to by <Alt+“underlined letter”>.

**FILE**: From this menu, the user can load an existing file, start a new file, save files, and exit and close the program

New: When the program is first opened, it is ready to take edits for a new file. This menu option is primarily used when you are finished with an already loaded file and you wish to create a new file.

Load: Selecting this option opens a window to allow the user to load a previously stored data file. Use the window to access the appropriate subdirectory (folder) and select a file to open.

Save: This option saves the current file and any edits without exiting the program. When the user selects the “Save” option of the program, a data entry window opens where the filename must be typed in. The filename is not read from the identification field on the Patient Information screen.

Data files are automatically given an .sdl extension. Only one set of data can be stored in a file. Therefore, if there is more than one administration of the SADL for the same patient, the filenames must be different. Data from two files may be compared using the Import feature available on the Graph screen, although the data will not be saved in the same file.

Save as: This option is used to save a copy of a data file under a different name. There will then be two copies of the data file under two different filenames. Type in the new filename and then select “OK”.

Exit: Select this or type <Alt + X> to exit the SADL program.



## PATIENT INFORMATION

To move around the Patient Information screen, use the <Tab> key or the mouse. <Tab> moves from field to field and <Shift + Tab> moves backwards through the edit fields. There are edit fields available for the patient's name, an identification number or name, the patient's date of birth (DOB), the test date, and comments. Four fields for demographic information about the patient's hearing aid use are provided.

*Patient Information screen*

**Name:** Jane Doe      **Number:** 53

**DOB:** 8/21/50      **Test Date:** 6/3/98       **Omit Cost Item (Question 14)**

**Comments: [max 174 chars]**

This is a test data file.

**Current H. Aid Experience**

- Less than 6 weeks
- 6 weeks to 11 months
- 1 to 10 years
- Over 10 years

**Total H. Aid Experience**

- Less than 6 weeks
- 6 weeks to 11 months
- 1 to 10 years
- Over 10 years

**Daily Hearing Aid Use**

- Less than 1 hour per day
- 1 to 4 hours per day
- 4 to 8 hours per day
- 8 to 16 hours per day

**Hearing Difficulty Unaided**

- None
- Mild
- Moderate
- Moderately Severe
- Severe

The “Omit cost” feature was generated for use by those patients who do not directly pay for their hearing aids. Separate norms were developed for those who personally paid for their hearing aids and for those whose hearing aids were provided by a third party, such as with insurance or the Veterans Administration. Select “Omit Cost Item”, using the spacebar or a mouse click, if the hearing aid(s) are provided by a third party. This will cause item #14 to be unavailable for response and for inclusion in analysis of the results. This item is a part of the Service and Cost subscale.

## DISPENSER-ENTERED RESPONSES

This mode would be used by the dispenser to record a patient's responses from a paper & pencil version of the SADL questionnaire. Use the mouse to select responses to the items.

*Dispenser-Entered Responses screen*

The screenshot shows a software window titled "SADL v1.0 - JANEDOE.SDL" with a menu bar (File, Help) and a toolbar containing icons for file operations and printing. The main area is divided into two columns. The left column lists 15 questionnaire items, each followed by a grid of seven buttons labeled A through G. The right column is titled "Describe Hearing Aids" and contains two sub-sections: "Right Ear" and "Left Ear", each with fields for Make, Model, Type, Serial #, and Fit Date. Below these is a "Patient's Preferred Use" section with radio buttons for Monaural and Binaural. The bottom section is titled "Hearing Aid Features (check all that apply)" and includes a list of features with checkboxes, such as Directional Mic, Multi-program, Multi-channel, T-Coil, Remote Control, Multiple Mic, Peak Clipping, Compression Limiting, TILL, WDRC, and BILL. A text box is provided for "Other" features.

Item	A	B	C	D	E	F	G
1. Speak with most...							
2. Sounds you don't want...							
3. H'aid in best interests...							
4. Notice loss more...							
5. Ask to repeat...							
6. Worth the trouble...							
7. Feedback...							
8. Content with appearance...							
9. Improve self confidence...							
10. Natural sound...							
11. Help on telephone...							
12. Competence of dispenser...							
13. Seem less capable...							
14. ** Reasonable cost...							
15. Dependable h'aid...							

\*\* Not applicable if omit cost item selected

**Describe Hearing Aids**

Right Ear	Left Ear
Make: Hearwell	Make: Hearwell
Model:	Model:
Type: ITC	Type: ITC
Serial #: 1234	Serial #: 1235
Fit Date: 6/3/98	Fit Date: 6/3/98

**Patient's Preferred Use**

Monaural  Binaural

**Hearing Aid Features (check all that apply)**

<input type="checkbox"/> Directional Mic	<input type="checkbox"/> Peak Clipping
<input type="checkbox"/> Multi-program	<input type="checkbox"/> Compression Limiting
<input checked="" type="checkbox"/> Multi-channel	<input checked="" type="checkbox"/> TILL
<input checked="" type="checkbox"/> T-Coil	<input checked="" type="checkbox"/> WDRC
<input type="checkbox"/> Remote Control	<input type="checkbox"/> BILL
<input type="checkbox"/> Multiple Mic	<input type="checkbox"/> Other:

### Hearing Aid Information

The right side of the screen provides an optional archive of fitting information about the patient's hearing aid(s).

## PATIENT-ENTERED RESPONSES

This function can be used in place of a paper copy of the survey. After accessing the response screen, pressing <Ctrl+Alt+L> locks the program, except for the Exit and Minimize buttons at the top right corner of the program window. When in this mode, the patient can only interact with the questionnaire items and cannot access other program features. Again pressing <Ctrl+Alt+L> toggles the locking feature off.

*Patient-Entered Responses screen*


**SATISFACTION WITH AMPLIFICATION IN DAILY LIFE**

This is a questionnaire on your opinions about your hearing aid(s). For each question, please choose the best answer for you from the list of words at the bottom of the screen.

Keep in mind that your answers should show your general opinions about the hearing aid(s) that you are wearing now or have most recently worn.

1. Compared to using no hearing aid at all, does your hearing aid(s) help you understand the people you speak with most frequently?

Not At All  
 A Little  
 Somewhat  
 Medium  
 Considerably  
 Greatly  
 Tremendously



Next Previous

Each question is on a separate screen. Use the “Previous” and “Next” buttons to move back and forth among the items. However, the patient cannot move ahead to the next screen (question) unless the current item has a response selected

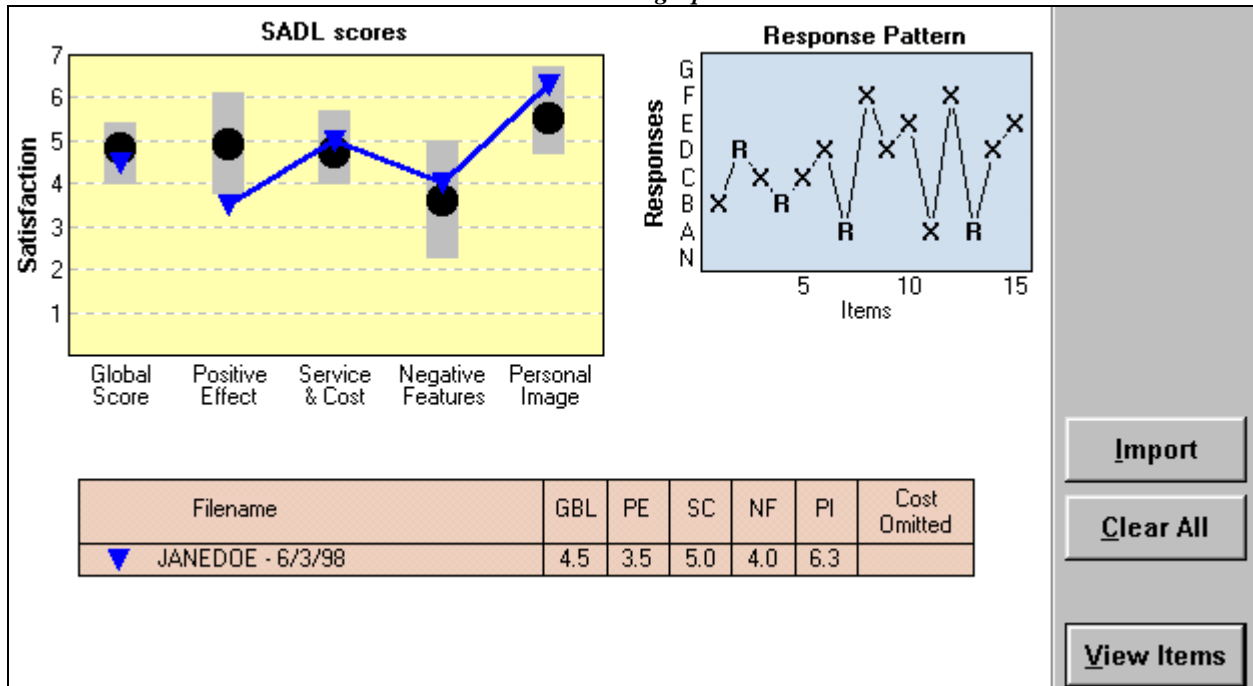
Note that the dispenser may archive the patient’s hearing aid fitting information, either before or after the patient completes the questionnaire, by opening the Dispenser-entered response screen and entering the information.

## GRAPH SCREEN

### *Test scores:*

On the upper left of the screen is a graph showing the patient's scores for each subscale (the triangle symbols). Higher scores indicate greater satisfaction. The graph also displays the mean scores for a normative group of hearing aid users (the black circles) and a gray bar representing their range of scores from the 20<sup>th</sup> to the 80<sup>th</sup> percentiles.\* Norms for Global score and the Service & Cost subscale are different when the cost item (#14) has been omitted.

*The screen graphs*



### *The table of data:*

At the bottom of the screen is a table of the patient's scores and the date of test administration. This table also alerts the program user if a file has been configured to omit the cost item. (See the explanation for "Omit Cost Item" in the section on the Patient Information screen.)

### *The graph of the response pattern:*

The upper right of the screen displays a graph of the patient's response pattern. This should be used to check for an anomalous pattern to the answers. They should appear somewhat random. The R's indicate items that are reversed for scoring.

### *Missing data:*

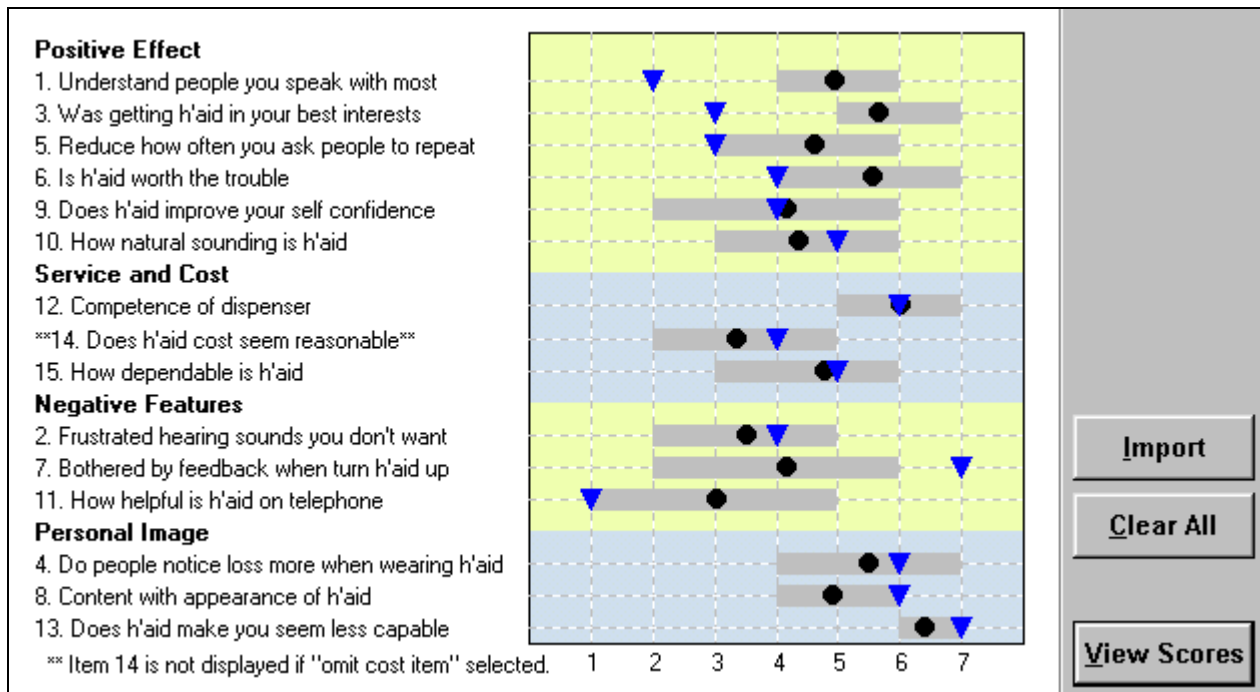
Because only a few items contribute to each subscale, any missing responses can have a substantial impact on the patient's score for that subscale. If any item on the questionnaire was not answered, the subscale which includes this missing data should be viewed with caution by

\*See Appendix A for a description of the subjects in the norm group.

the dispenser when compared with the normative data. For this reason, the symbol for a subscale score with missing data will be red.

**The “View Items” button:**

The “View items” button brings up a screen showing each subscale and some words from the text of its individual items. The patient’s response for each item is shown compared with the normative group’s mean score and range of scores from the 20<sup>th</sup> to the 80<sup>th</sup> percentiles.



This program feature could be used to investigate a subscale of concern or of particular interest to the clinician. For instance, if a patient’s score on a subscale varied significantly from the norm, the clinician could view the responses to the individual items in that subscale to see if a single item was causing this result. Then, it could be determined if the patient needed some attention in this area to assist the rehabilitative process.

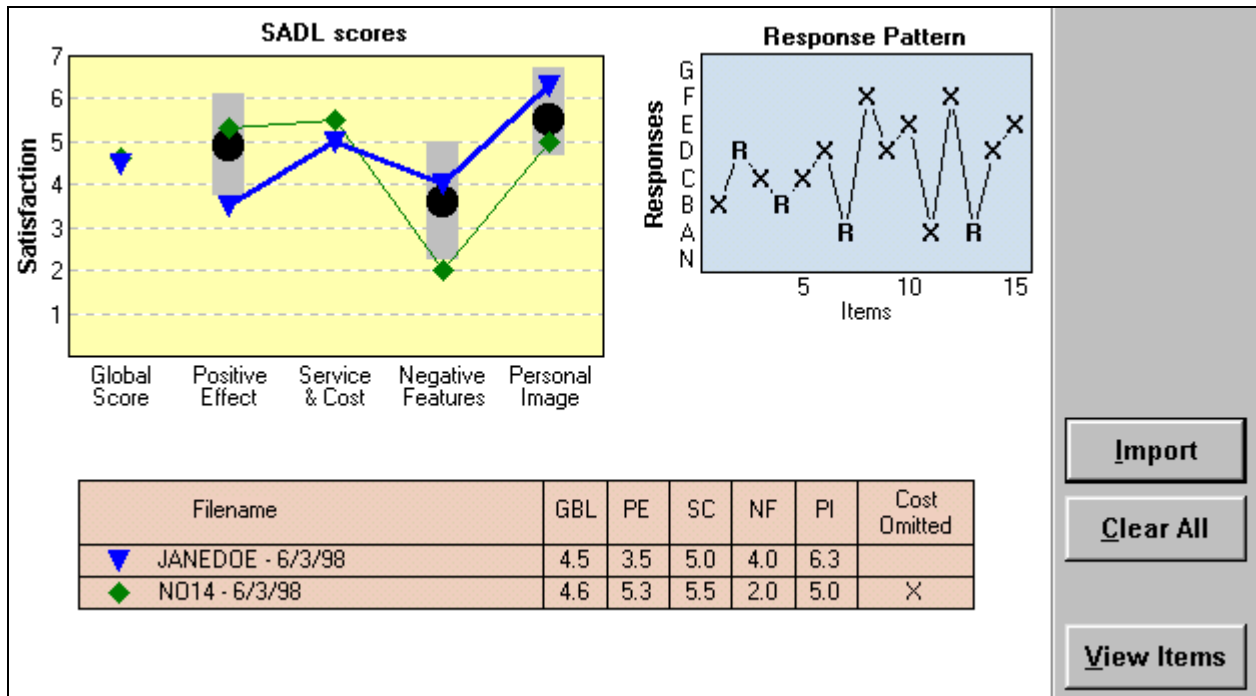
The “View scores” button returns the user to the original Graph screen.

**The Import feature of the SADL program:**

The “Import” button can be used to access data from other files so that they can be displayed on the graph simultaneously with the data from the current or active file. This feature could be useful in several ways. For example, the dispenser could compare a patient’s results over time; i.e., a test-retest situation. It could also be used to contrast the satisfaction results from two different patients with the same or a different hearing aid fitting.

Several files can be imported at a time. The scores from each imported file will be represented on the graph using a different symbol and color. The imported data will also print out on the graph

but is not saved with the active file. The imported file's data is also added to the table of scores at the bottom of the screen. The "Clear All" button removes the imported data, leaving only the results for the active file.



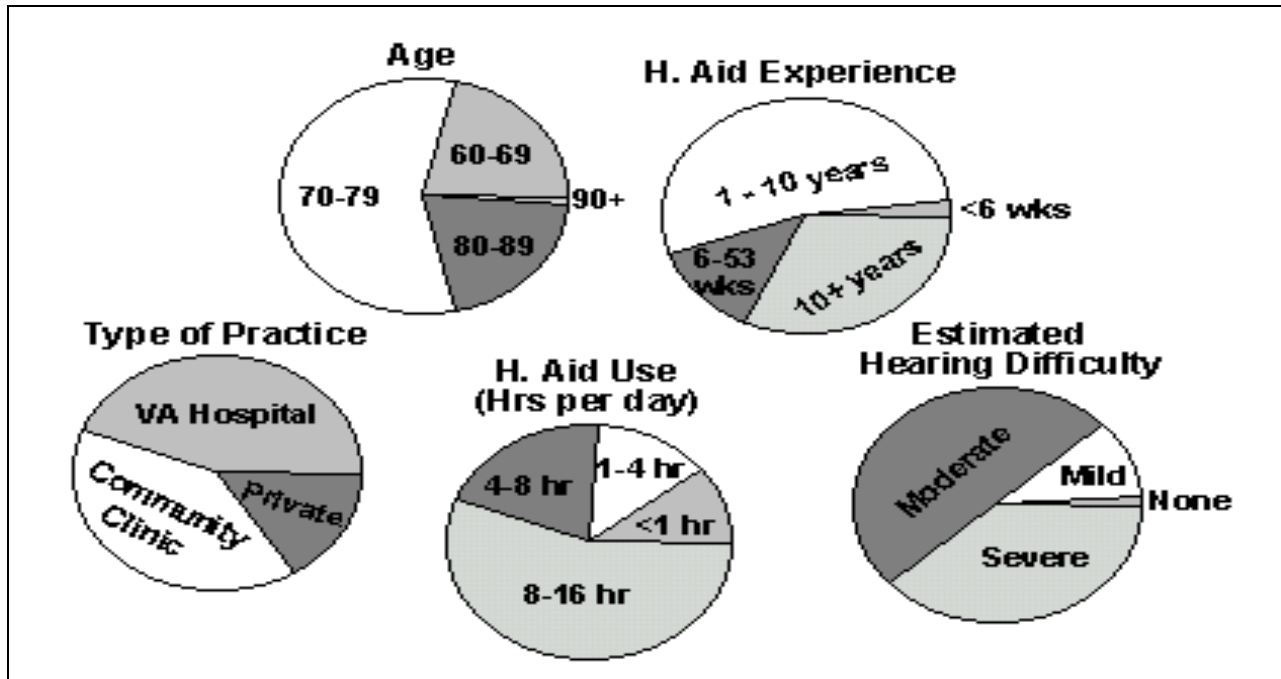
If an imported file differs from the active file regarding the inclusion of the Cost item (#14), the graph of the scores will display the Service and Cost subscale scores for both files. However, the normative data for that subscale and for the Global score will not be displayed. This is because there are different norms for these scores based on whether a file omits the Cost item or not. If the dispenser wishes to compare both files to the norms, the file which includes item #14 can be retroactively changed to omit it.

## PRINT

Selecting this icon allows the user to set-up the printer as with other Windows programs. The printout includes the patient information entered, the archived information about the hearing aid fitting, a table of the patient's subscale scores, the graphs of the subscale scores and response pattern as on the Graph screen, and the list of items and graph of scores as on the "View items" screen. The printout of the graphs will also show the currently imported data. This information will print in color if a color inkjet or laser printer is used.

## APPENDIX A

Demographic characteristics of subjects in the normative group. Hearing aid models and styles were mixed.





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