Welch Allyn® OAE Data Manager

Directions for use

WelchAllyn®

Advancing Frontline Care™

For patent information, please visit www.welchallyn.com/patents.

For information about any Welch Allyn product, contact Welch Allyn Technical Support: www.welchallyn.com/about/company/locations.htm.

GSI is an ISO 13485 certified corporation.

`#` 39411-1 (CD)
Material Number 105889 DIR 80019029 Ver. C

`#` **39411-2** (printed copy)
Material Number 105890, DIR 80019029 Ver. C
GSI 8104595 Rev. B

Manufactured for Welch Allyn, Inc.
4341 State Street Road
Skaneateles Falls, NY 13153-0220 USA

Grason-Stadler
7625 Golden Triangle Drive
Eden Prairie, Minnesota 55344USA

www.welchallyn.com

WelchAllyn®
Advancing Frontline Care™

Contents

Introduction

This directions for use describes the capabilities and operation of the Welch Allyn OAE Data Manager (data manager).

The data manager is data management software that compliments the Welch AllynOAE Screener (screener). It provides the ability to transfer patient otoacoustic emissions (OAE) test data from the data manager to a computer to view, archive, manage, or print OAE reports; and transferring patient names to the screener. For Newborn Hearing Screening Programs, the data manager integrates with third party database tools, such as HiTrack and OZ eSP.

Reports can be saved in different electronic formats or image formats and attached to electronic medical records (EMRs):

Format	Options
Electronic	.pdf, .rtf
Image	.jpg, .tif, .gif, .png, .bmp, .emf, and .wmf

Indications for use

The data manager is used to view, archive, and report OAE data acquired from test results saved in the screener. The screener is connected to a computer and the OAE data is transferred to the computer, where it is accessed by the data manager. The data manager also can generate patient names and transfer the names to the screener. The OAE data is incorporated into hearing screening programs for patients of all ages and used by pediatricians, internists, family practitioners, nursing staff, or nurse managers. The screener and data manager have to be connected to a computer in order for test results to be transferred, viewed, and saved. Data previously transferred to the data manager may be viewed for evaluation without connecting to the screener. Data transferred from the screener includes Distortion Product Otoacoustic Emissions (DPOAEs) from each ear; they are displayed in graphic and tabular formats. The data includes screening data from one or both ears. Screening data result options are PASS, REFER, NOISE, and NO SEAL. The patient demographic and test result data are saved to a directory for future retrieval or convertion to an electronic format for transfer to an EMR program.

Symbols

Documentation symbols

⚠️	**WARNING** The warning statements in this manual identify conditions or practices that could lead to illness, injury, or death.
⚠	**CAUTION** The caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property, or loss of data. This definition applies to both yellow and black and white symbols.

Regulatory symbols

Symbol	Description	Symbol	Description
SN	Serial number	EC | REP	EU Authorized Representative
▲▲	Manufacturer	#	Reorder number
📖i	Consult Operating Instructions		

About warnings and cautions

Warning and caution statements appear on the Welch Allyn OAE screener (screener), on the packaging, and on the shipping container.

Setup

Precautions for patient confidentiality

Protecting patient information is essential to the relationship between provider and patient. It is critical to develop policies and procedures that safeguard electronic patient information stored by your organization. The following processes help ensure the security of your patient data.

- Create regular backups the data.
- Store a backup of the data in a safe manner.
- Encrypt data to avoid misuse if stolen.
- Create unique computer logins for all users.
- Encrypt all communication to the data manager when using a third party networked software in case information is captured during network transmission. See your third party user manual for details.
- Create unique software logins for everyone using a third party networked software. This enables you to trace and identify anyone who updates or deletes data from the data manager. See your third party user manual for details.

Warnings and cautions

⚠️ **WARNING** Use only the provided power supply to charge the screener. Injury to personnel or damage to the screener can result when a three-prong to two-prong adaptor is connected between the screener power supply and a mains outlet.

⚠️ **WARNING** No modifications to the screener are allowed by anyone other than a qualified Welch Allyn service representative. Modification of the screener could be hazardous to patients and personnel.

⚠️ **WARNING** The screener has been verified by an independent laboratory to conform to international standards for electromagnetic emissions and immunity (EMC). The user is advised to avoid installation and use of this screener in proximity to other products or equipment that may emit or be susceptible to electromagnetic interference, including cellular phones. If the screener is used adjacent to other products or equipment, you are instructed to verify that no disturbance is found in the operation of this or other equipment in proximity.

> ⚠️ **WARNING** Any program aimed at obtaining reliable measurements of otoacoustic emissions should be staffed and supervised by appropriately trained individuals.

System requirements

Systems requirements are listed for:

- Computer (minimum)
- Operating systems
- Software

Computer requirements

Following are the minimum computer requirements needed for the data manager.

- CPU: 1 GHz
- RAM: 512 MB
- Hard Disk: 2 GB
- USB Port: 1 each for the screener, data manager and, if used, a printer
- Display Resolution: 1024 x 768
- CD-ROM: Required if installing from a CD
- Network connections: 1 each if installing from a network location or printing to a network printer
- Internet browser: Internet Explorer 6.0 or later and current service pack are recommended

Supported operating systems

- Microsoft Windows® 7, 8, Vista, XP Professional or Home (Service Pack 3)
- Microsoft Windows® Server (2003 or newer); Windows Imaging Component (WIC) also must be installed

Software requirements

- Microsoft .NET Framework version 4.0 (bundled with installer if not already installed)
- Adobe®Reader
- FTDI USB Driver for instrument connection

Install the data manager

Always make a copy of the database file and store the file in a safe location before a new installation or upgrade.

Each screener comes with a data manager. The data manager can be installed from the supplied flash drive or from the CD.

Install from the CD

1. Insert the CD into the computer's CD drive.
2. Go to **Windows Explorer > Computer: > CD Drive (X:) > setup.exe**.
3. Double-click **setup.exe**, and then follow the directions.

Connect the screener

There are two options for connecting the screener to a computer:
- From the screener to a computer using a USB connection.
- From the screener cradle to a computer using a USB connection.
- From the screener to a computer using a Bluetooth WiFI connection

The instructions in this Directions for use assume connections are made directly to the screener using a USB connection. However, all functions also can be performed with the screener in the cradle using a USB connection or a WiFi Bluetooth connection.

Connect the screener to a computer

Use a standard USB to micro-USB cable to connect the screener to a computer:

1. Power on the screener and ensure that the screener is charged.
2. Plug the micro-USB connector into the port on the bottom of the screener.
3. Plug the USB connector into a USB port on the computer.
4. Power on the computer, and then launch the data manager.

   The message, "Waiting on computer" appears on the screener.
5. Begin data or name transfers.

Connect the screener cradle to a computer

Use a standard USB-A to USB-B cable to connect the screener cradle to a computer.

1. Power on the screener and ensure that the screener is charged.
2. Plug the USB-B connector into the port on the back of the screener cradle.

   The cradle does not need to be connected to a mains outlet for data transfer.
3. Plug the USB-A connector into a USB port on the computer.
4. Place the screener in the cradle.
5. Power on the computer, and then launch the data manager.

   The message, "Waiting on computer" appears on the screener.
6. Begin data or name transfers.

You must use a USB-A to USB-B cable between the cradle and the computer for data transfer. The micro-USB port on the cradle does not support data transfer. Use the cradle for recharging the screener when power is supplied to the either the micro-USB or the USB-B port. Use the micro-USB port on the bottom of the screener for both data transfer and recharging.

Connect the screener to a computer using Bluetooth®

You can only pair one device with the screener at any given time.

1. Power on the screener and ensure that the screener is charged.
2. Power on the computer, and then launch the data manager.

    The message, "Waiting on computer" appears on the screener.
3. If this is the first time the screener is being connected using Bluetooth, then on the Transfer section of the Home tab, click **Detect Com Port**.
4. Ensure that the screener is paired to your computer.

    Pairing is only required upon initial data transfer.
5. On the Main menu of the screener, press the **UP** control panel button.

    The BT menu appears.
6. Press the **LEFT** or **RIGHT** control panel button to begin data or name transfers.

Understand the data manager interface

The data manager is used to view, archive, and report OAE data acquired from test results saved in the screener. The screener is connected to a computer and the OAE data is transferred to the computer, where it is accessed by the data manager. The data manager also can generate patient names and transfer the names to the screener.

The main window contains:

- Menu bar
- Toolbar
- Patients tab
- Recent Results tab
- Result section
- Equipment section
- Numeric information section
- Graphic information section

The Result, Equipment, Numeric information, and Graphic information sections display information related to the patient selected in the Patients tab or Recent Results tab.
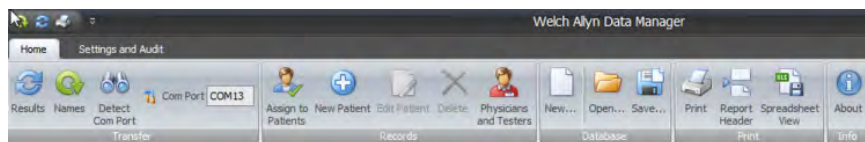
Ribbon elements

The data base ribbon at the top of the window has two tabs:
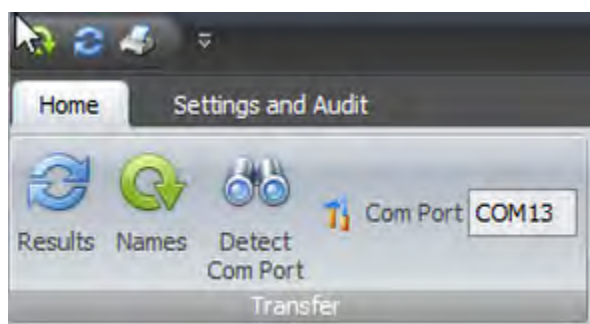
- Home
- Settings and Audit

Home tab

The majority of functions, such as viewing test data, adding patients, and transferring patient names are accessible from the Home tab. The Home tab has five sections:

- Transfer
- Records
- Database
- Print
- Info

Transfer section

The Transfer section contains four items:

- Results
- Names
- Detect Com Port
- Com Port number

Transfer results from the screener to the data manager

1. Connect a computer to the screener by plugging the USB cable connector into an available USB port on the computer and the Micro-USB cable connector into the port at the base of the screener.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.

2. If a connection is not detected, click **Detect Com Port** to establish the Com Port connection.

3. Click the **RESULTS** icon to transfer test results.

4. When all data has been transferred, click **OK**.

5. Navigate to the Recent Results tab, and then click the "**Unnamed**" patient to view all transferred tests.

6. On the Records section of the Home tab, click **New Patient** to add patient names and demographic information for patients tested.

7. On the Records section of the Home tab, click **Assign to Patients**, and then drag all unnamed test results on the left side of the window to the appropriate patient name on the right side of the window.

8. Click **OK.**

Use Bluetooth to transfer results from the screener to a computer

1. Connect a computer to the screener by pairing the screener with the computer.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.

2. If a connection is not detected, click **Detect Com Port** to establish the Com Port connection.

3. Click the **RESULTS** icon on the data manager, and then immediately press the **UP** control panel button on the screener to display the Bluetooth menu for data transfer.

4. Press the **LEFT** or **RIGHT** control panel button on the screener to transfer data.

5. When all data has been transferred, click **OK**.

6. Navigate to the **Recent Results** tab, and then click the "**Unnamed**" patient to view all transferred tests.

7. On the Records section of the Home tab, click **New Patient** to add patient names and demographic information for patients tested.

8. On the Records section of the Home tab, click **Assign to Patients**, and then drag all unnamed test results on the left side of the window to the appropriate patient name on the right side of the window.

9. Click **OK.**

Transfer patient names to the screener

1. Power on the screener.

2. Connect the screener to a computer using a Bluetooth connection or the micro-USB connector.

   The data manager defaults to the previously used Com Port number and automatically detects the screener on that port. The message, "Waiting on computer" appears on the screen. See "Detect Com Port" if this is the first time the instrument is connected.

3. On the Home tab, click **Names**.

   The Store Names to Instrument window appears.

4. If necessary, click **Clear List** to clear previously transferred patient names, and then immediately press the **UP** control panel button on the screener to display the Bluetooth menu for data transfer.

5. Press the **LEFT** or **RIGHT** control panel button on the screener to transfer data.

6. If desired, click **Clear Instrument** to delete all patient names and test records on the screener.

   The patient names will be displayed on the device in alphabetical order.

7. Drag patient names from the **Patients list** to the **Store Names to Instrument** screen to build the screener list.

8. To transfer patient names to the screener, click **Store Names**, and then immediately press the **UP** control panel button on the screener to display the Bluetooth menu for data transfer.

   The names are transferred from the database to the screener.

9. Press the **LEFT** or **RIGHT** control panel button on the screener to transfer data.

Detect the Com Port

1. Turn on the screener and connect the screener to the computer using a Bluetooth connection or the micro-USB connector.

2. Click **Detect Com Port** when the screener is connected for the first time or when connecting to a different screener device.

Records section

The Records section contains five items:

- Assign to Patients
- New Patient
- Edit Patient
- Delete

• Physicians and Testers

Assign unnamed tests to patients

Assign unnamed tests to patient names using the steps below. Transferred test results are listed as "Unnamed" if patient names are not transferred to the screener prior to testing.

1. Add new patient names to database (see **Add new patient**).
2. Click **Assign to Patients**.
3. Drag the unnamed test results from the list on the left to the selected patient name on the right. For mulitple test results, hold down the **Ctrl key** while selecting the test results.
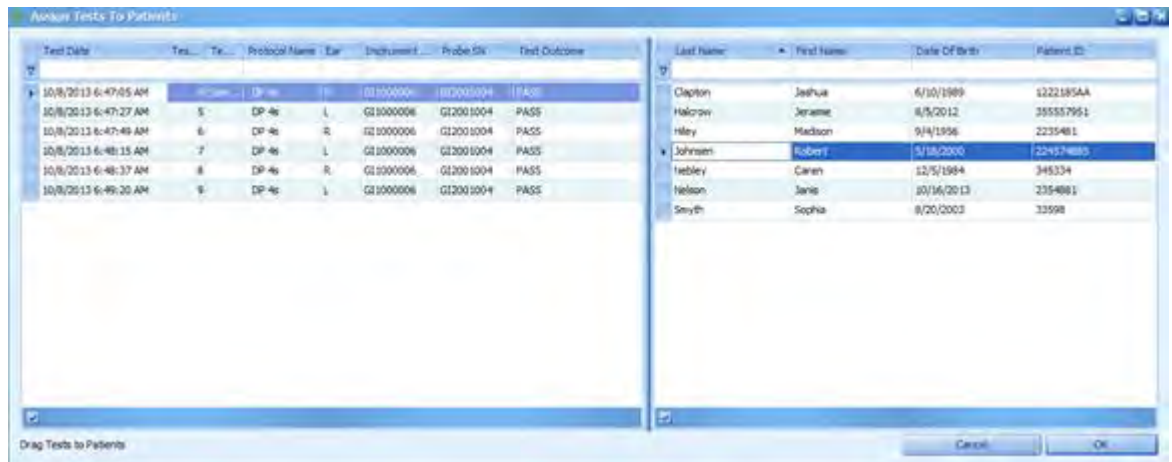
A confirmation window appears with the patient name and number of tests to be transferred.

4. Click **OK** if the information is correct.
5. Click **OK** when you have completed your transfers.

Add a new patient

1. On the Home tab in the Records section, click **New Patient**.

   The New Patient Information screen appears.

2. Enter patient demographics.
3. Enter patient-specific history.
4. Click **OK.**

   The new patient is added to the database.

Edit a patient record

1. From the Patients tab, select a patient name.
2. Click **Edit Patient**.

   The patient record appears.

3. Add or correct patient information.
4. Click **OK.**

Delete a patient name or test

1. From the Patients tab, select the patient name or specific test to be deleted.

2. Click **Delete.**

   A warning window appears with the specific patient name or test to be deleted.

3. Click **Yes** to permanently delete the patient name and test results from the database.

4. Click **No** to cancel the delete action.

Add physician and tester names

You can build a list of referring physicians and testers that can be assigned to patient records in the New Patient function of the Records section.

1. Click the **Home** tab, and then in the Records section, click **Physicians and Testers**.

The Physicians and Testers screen appears.

2. At the bottom of the screen, click **+** under the Physician Info column to add a doctor to the physician list, or click **+** under the Tester Name column to add a tester name.

3. Enter the name as you want it to appear in the database and on the report.

4. Click **OK.**

Database section

The Database section contains three elements:
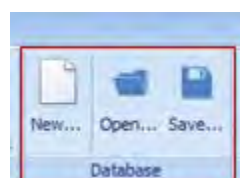
- New

- Open
- Save

Create a new screener database

1. On the Home tab In the Database section, click **New**.

2. Name and save the new database file in the computer directory location of your choice.

3. Click **OK.**

   A dialog box appears indicating that the new screener database will be used the next time the data manager is opened.

4. Click **OK.**

   The previous database is automatically archived and closed. The data manager closes automatically.

5. Launch the data manager to view the new database.

   The new data base is empty and ready for data transfer.

Open a database

1. On the Home tab In the Database section, click **Open.**

   The computer directory appears.

2. Navigate to the desired database, and then click **Open.**

   A dialog box appears indicating that the new screener database will be in use the next time the data manager is opened. The previous database will be saved in its original location. The data manager will automatically close.

3. Reopen the data manager to view the selected database.

Save a database

Create a naming convention for your database files that is easy to remember and use. This will assist you in efficiently locating patient records. The default database name is WA_patient.mdb and is located at (C:) Users > XXX. We recommend that you Save and rename the default database to the desired location on your computer.

1. On the Home tab, in the Database section, click **Save.**

2. Navigate to the computer directory location of your choice, and then name the database file.

   A confirmation message appears.

3. Click **OK.**

   The database file is saved to the computer directory location.

Print section

The Print section on the Home tab contains three options:
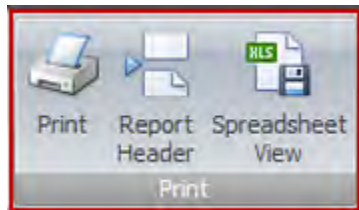
- Print
- Report Header
- Spreadsheet View

Print icon

The Print icon enables you to access the Print Preview tab.

Print Preview tab

The Print Preview tab includes several functions:

- Document
  - Open
  - Save
- Print
  - Print
  - Quick Print
- Page Setup
  - Scale
  - Size
- Zoom
  - Pointer
  - Zoom Out
  - Zoom (by percentage)
  - Zoom In
- Export
  - Export To
  - Close Print Preview

Open a document

1. On the Home tab in the Print section, click **Print**.

   The Print Preview tab appears.

2. On the Print Preview tab in the Document section, click **Open**.

The computer directory appears.

3. Navigate to the directory location of the test results document.

4. Double-click the document name.

   The test results document opens in the data manager.

Save a report

Create a naming convention for your database files that is easy to remember and use. This will assist you in efficiently locating patient records.

1. With a test report displayed, on the Home tab, in the Print section, click **Print**.

   The Print Preview tab appears.

2. Click **Save.**

   The navigation dialog box appears.

3. Navigate to your desired directory location, and then name the report.

   A confirmation message appears.

4. Click **OK.**

   The report is saved to your desired location.

Print all results

1. Select the patient name in the Patients tab.

   The patient test results appear in the window.

2. On the Home tab in the Print section click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

3. Review the report. If the data is what you want, perform one of these options:

   • Click **Quick Print** to print to your default printer

   • Click **Print** to select a printer.

   • Click **Print** to select multiple copies.

See "Select a printer" and "Print multiple copies" for more information.

Print selected test reports for a patient

1. Click the **Patients** tab, and then select the patient name.

   The patient test results appear in the window.

2. To print selected test results, highlight desired tests results in the **Result** section of the window by holding down Ctrl + each desired record.

3. On the Home tab in the Print section, click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

4. Review the report. If the data is what you want, perform one of these options:

   • Click **Quick Print** to print to your default printer.

   • Click **Print** to select a printer.

   • Click **Print** to select multiple copies.

See "Select a printer" and "Print multiple copies" for more information.

Print to a default printer

1. Click the **Patients** tab, and then select the patient name

   The patient test results appear in the window.

2. To print selected test results, highlight desired tests results in the **Result** section of the window by holding down Ctrl + each desired record.

3. On the Home tab in the Print section, click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

4. Review the report.

5. To print one copy of the report to your default printer, click **Quick Print**.

   See "Print multiple copies" for more information.

Select a printer

1. Click the **Patients** tab, and then select the patient name.

   The patient test results appear in the window.

2. On the Home tab in the Print section, click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

3. Review the report. If the data is what you want, perform one of these options:

4. Click **Print** to select a printer.

   The Print dialog box appears.

5. Select the printer from the list of printers.

6. If multiple copies are required, enter the number of copies in the Copies field.

7. Click **Print.**

Print multiple copies of a report

1. Click the **Patients** tab, and then select the patient name.

   The patient test results appear in the window.

2. On the Home tab click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

3. Review the report. If the data is what you want, perform one of these options:

4. Click **Print**.

   The Print dialog box appears.

5. In the Copies field, enter the number of copies.

6. If you want to print to a printer other than your default printer, select the printer from the list of printers.

7. Click **Print.**

Scale a document

1. Click the **Patients** tab, and then select the patient name.

   The patient test results appear in the window.

2. On the Home tab click **Print**.

The Print Preview tab appears; the test results report appears in the window.

3. On the Print Preview tab, in the Page Setup section, click **Scale**.

Size a document

1. Click the **Patients** tab, and then select the patient name.

    The patient test results appear in the window.

2. On the Home tab in the Print section, click **Print**.

    The Print Preview tab appears; the test results report appears in the window.

3. On the Print Preview tab, in the Page Setup section, click **Size**.

Use the Zoom feature

Use the Zoom enlarge and reduce features to view data.

Export test results in electronic formats

1. Click the **Patients** tab, and then select the patient name.

    The patient test results appear in the window.

2. On the Home tab in the Print section, click **Print**.

    The Print Preview tab appears; the test results report appears in the window.

3. Click **Export To**.

4. Select the electronic format.

Report Header

The Report Header enables you to create a heading for your report, such as your clinic or hospital name and address.

Create a Report Header

1. On the Home tab in the Print section, click **Report Header**.

    The Test Report Header Options dialog box appears.

2. Enter information for your organization, such as name, address, clinician, and the like.

3. Click **OK.**

    A Report Header appears on the report.

Spreadsheet view

The Spreadsheet View allows patient data to be exported to an Excel file. The Test Results tab exhibits all results from the patient record fields. The Statistics tab exhibits the percent of Pass, Refer and Other test results by tester. Excel operations can be performed on this data.

Display in spreadsheet view

On the Home tab in the Print section, click **Spreadsheet View** to access the data in an Excel format.

Data manager information

View data manager information on the Home tab in the Info section.

The information listed includes:
- The software version
- The database location
- The location of the log file
- About Boys Town Norms

Settings and Audit tab

Settings and Audit tab

The Settings and Audit tab enables you to determine which two fields are viewed on the screener when the Names transfer function is used. It also enables you to audit ear changes or test changes made to patient records. The Settings and Audit tab has two sections:
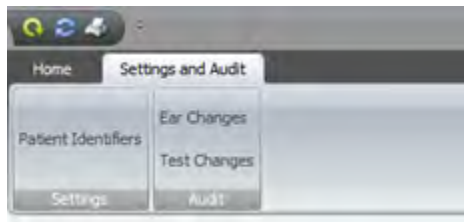
- Settings
- Audit

Patient Identifiers determine the two fields that you view on the screener when the Names transfer function is used. The default setting for the first field is the Last Name;

the default setting for the second field is the First Name. You can select alternatives for the last name and first name using the Patient Identifiers section.

Set patient identifiers

1. On the Settings and Audit tab, click **Patient Identifiers**.

   The Set Patient Identifiers screen appears.

2. In the First Identifier section, select the field you wish to see in the screener. The First Identifier must be a unique identifier for the patient.

3. In the Second Identifier box, select the field you wish to see in the screener.

4. Click **OK.**

The screener uses two fields to identify the patient. Both fields are visible on the screener during the scrolling function to select a patient. After a patient is selected by pressing the top control panel button, only the first field is visible for identification purposes when testing.

Use the Audit functions

The Audit section includes two items:
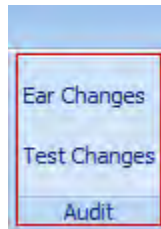
- Ear Changes
- Test Changes

1. On the Settings and Audit tab in the Audit section, click **Ear Changes** to review test records that had the Test Ear changed.

2. On the Settings and Audit tab in the Audit section, click **Test Changes** to review patient-specific test results that have been re-assigned from one patient name to another.

View patient results

Patients and Recent Results tabs

The Patients tab displays a cumulative list of all patient information that has been transferred to the database manager. Unnamed patients are test result data that have been transferred from the screener but have not been assigned to a specific patient.

The Recent Results tab displays the most recent list of patient and test results that have been transferred from the screener.

Patients tab

The Patients tab contains a cumulative list of all patient names in the database, including most recently transferred results. If a patient name was not created in the data manager prior to testing, the test results for the patient are tranferred and listed under the Last Name "Unnamed." See "Assign to patients" for instructions on how to transfer Unnamed results to a specific patient.

View patient names

Access individual patient names from the Patients tab.

Select a patient name

Click the Patients tab, and then click a patient **Last Name**.

Test results for that patient appear in the Result and Equipment section of the main window. When you select a specific test result in the Result section, the test result detail is displayed in the Numeric and Graph sections of the main window. The patient and test selected are highlighted.

Search patient records using Auto Filter

At the top of the patient list on the Patients tab, there is a blank row. Use this row to search for specific patients.

Last Name	First Name	Date Of Birth	Patient ID
☑			
Unnamed			
Clapton	Jashua	6/10/1989	1222185AA
Hiley	Madison	9/4/1956	2235481
Johnsen	Robert	5/18/2000	224574885
Nelson	Janis	10/16/2013	2354881
Smyth	Sophia	8/20/2003	33598
Nebley	Caren	12/5/1984	345334
Charter	Jeramie	8/5/2012	355557951

1. Enter the **Last Name**, **Date of Birth**, or **Patient ID** in the respective blank field, and then press **Enter** on your keyboard.

    All patient names that meet the criteria appear.

2. Click **x** at the bottom left-hand corner to close the dialog box and return to the full patient name list.

Result section

The Result section displays a cumulative list of test results for a specific patient. This information appears when a patient is selected in the Patients tab.

Sort the Result section

The Result section can be sorted by Test #, Ear, Test Date, Avg Time, Outcome, Protocol, Test Type, Tester, and Notes.

1. Click the column header by which you want to sort the list.

    The test results appear in the order determined by the column chosen for the sort.

2. Click the desired column again to reverse the sort order.

Search patient names using Auto Filter

There is a blank row at the top of the Result section. Use this row to search for specific result attributes.

1. Enter a parameter in your chosen column, and then press **Enter**.

    All tests that meet the criteria for that column appear.

2. Click the "x" at the bottom left-hand corner to close the dialog box and return to the full test results.

Equipment section

The Equipment section includes the screener and probe serial numbers used to conduct the screening. It also includes the software version number.

Numerical results section

The numerical results section displays complete test information for a specific test that includes F2 frequencies, L1 and L2, DP, NF, SNR, and outcome.

Graphic results section

The Graphic results section displays test results of selected test in graphical form.

The Graphic results section consists of two tabs:
- Value Graph tab
- SNR tab

View Value Graph details

The Value Graph tab displays OAE test data in a line graph format showing response amplitude in dB SPL of the emission and noise floor (NF) across the test frequency range. Ear data is color and symbol coded: red circles represent the right ear, blue X's represent the left ear. For the default screening bar graphs, green bars represents PASS and orange bars represent REFER.

Move your mouse over an individual data point to view details at a given frequency.

The enlarged circles and triangle symbols designate the selected responses.
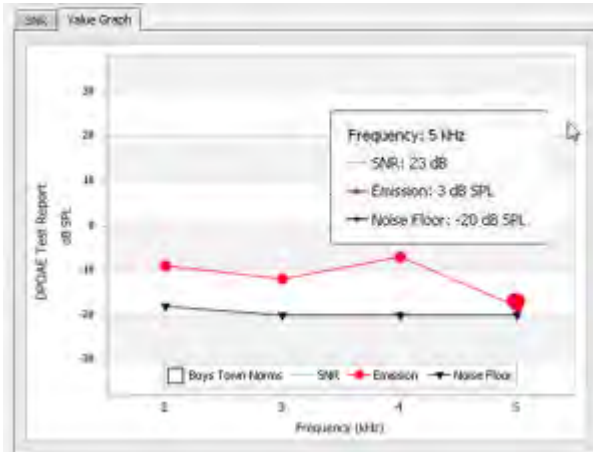
View Boys Town norms

1. View Boys Town Norms by clicking the Boys Town Norms box in the graphic display.
2. Hide the Boys Town Norms by clicking the Boys Town Norms box a second time.

   Find more information on the Boys Town Norms on the Home tab in the About box.
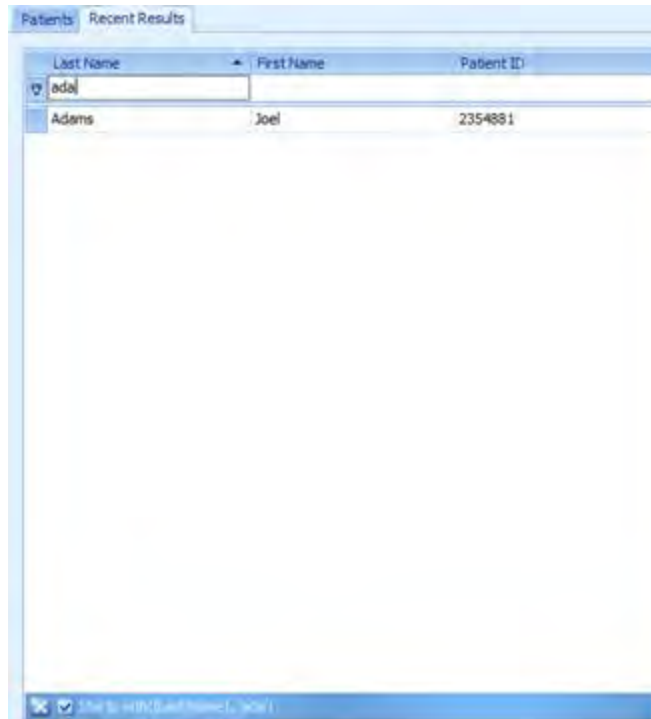
View SNR graph details

The SNR tab displays the signal-to-noise ratio in a bar graph format of each test frequency.

Move your mouse over an individual data point to view details at a given frequency.
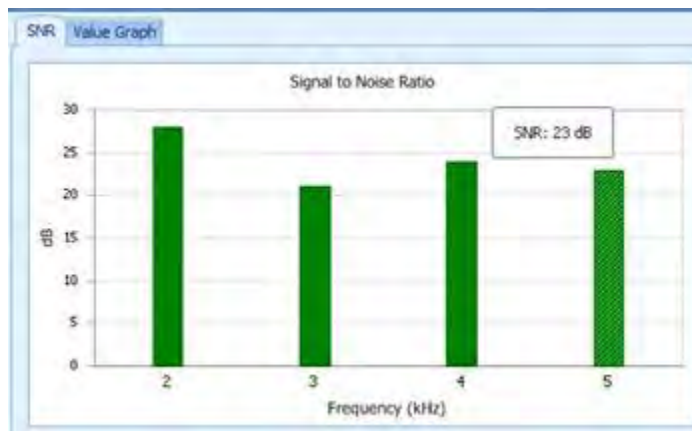
Recent Results tab

The Recent Results tab is a list of all patients and tests that were most recently transferred from the screener to the database manager. You can search by patient last name or ID number to find records.

Customize the display

When the data manager is installed, columns and data windows are sized to best fit the resolution of your computer screen. Columns of data may be added, deleted, or moved in the Patients and Result windows to customize the data manager view.

The columns that can be added are specific to the window. Patients, Result, and Equipment windows can be sized. The most recent changes to the data manager will be held and used the next time the data manager is opened.

Sort the patients list

1. Click the **Patients** tab, and then click the column header by which you want to sort the list.

   If sorting by Last Name, the list appears from A-Z. If sorting by Date of Birth, the list appears with the earliest birth year first. If sorting by Patient ID, the list appears numerically with the smallest number first.
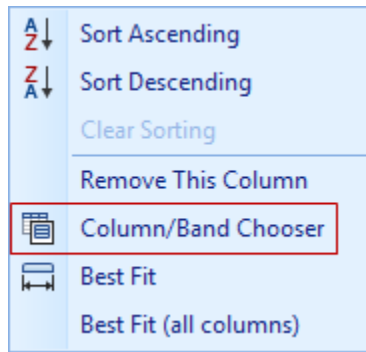
2. Click the desired column again to reverse the sort order.

Move columns

Click and drag the column header to the desired location.

Add columns

1. Right-click in the header column, and then select **Column/Band Chooser**.

The Customization window appears.

2. Double-click or drag the column of data you want to add from the Customization window to the desired location in the Patients tab or Result section.

3. Click **x** at the bottom-left of the window to close the Customization window.

The new column appears in the main window. Adding multiple columns of data will alter the main window view.

Remove columns

There are two methods available to remove columns.

1. Right-click in the header column you want to remove, and then select **Remove This Column**.

2. Right-click in the header column you want to remove and drag the column to the **Column/Band Chooser**.

Change the size of a window

Click and drag the dark blue borders of the window to the desired position.

The Value Graph key (symbols for SNR, Emission and Noise Floor) will move into the data if the window is sized too small.

Remove sections

Sometimes it is necessary to remove an entire section (band) of fields, such as the Equipment band.

Right-click and drag the band title to the Bands tab in the Customization window.

Typical use case: Transfer patient names to screener and data to the data manager

Typical use case

A typical use of the data manager would be to:

- Transfer patient names to the screener at the start of the day
- Test patients
- Transfer data to the data manager database
- Print test results

Transfer patient names to the screener and test

1. Launch the data manager.
2. Click **New Patient** to add all patient names to be tested.
3. Turn on the screener and connect the screener to the computer.
4. Click **Names.**
5. Drag the patient names to be tested from the patient list to the **Store Names to Instrument** window.
6. Click **Store Names** to transfer patient names to the screener.
7. Disconnect the screener from the computer.
8. Complete all of the testing using the screener

Test patients

See the Welch Allyn OAE screener *Directions for use* for instructions on using the device for testing.

Transfer results from the screener to the data manager

To transfer results from the screener to the data manager database:

1. Plug the USB cable connector into an available USB port on the computer and the Micro-USB cable connector into the port at the base of the screener.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.

2. On the data manager, click **Results** to transfer the test data from the screener to the database.

3. In the Results section of the data manager, click **Notes** to add notes to a specific test.

   The notes appear in the printed report.

Print results

1. Select the patient name in the Patients tab.

   The patient test results appear in the window.

2. On the Home tab in the Print section click **Print**.

   The Print Preview tab appears; the test results report appears in the window.

3. Review the report. If the data is what you want, perform one of these options:

   - Click **Quick Print** to print to your default printer
   - Click **Print** to select a printer.
   - Click **Print** to select multiple copies.

   See "Select a printer" and "Print multiple copies" for more information.

Transfer results from the screener to the data manager

1. Connect a computer to the screener by plugging the USB cable connector into an available USB port on the computer and the Micro-USB cable connector into the port at the base of the screener.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.

2. If a connection is not detected, click **Detect Com Port** to establish the Com Port connection.

3. Click the **RESULTS** icon to transfer test results.

4. When all data has been transferred, click **OK**.

5. Navigate to the Recent Results tab, and then click the "**Unnamed**" patient to view all transferred tests.

6. On the Records section of the Home tab, click **New Patient** to add patient names and demographic information for patients tested.

7. On the Records section of the Home tab, click **Assign to Patients**, and then drag all unnamed test results on the left side of the window to the appropriate patient name on the right side of the window.

8. Click **OK.**

Typical use case: Collect, transfer, and assign results to a patient record

Use case: Collect, transfer, and assign results to a patient record

The screener can be set to automatically number each test. After transferring the data to the data manager, each test number can be assigned to a patient name. In this use case, it is important to manually record the Test Number displayed on the screener to the patient name/ear for each test. This enables you to accurately assign tests to the appropriate patient record in the data manager.

The screener must be set to the "250 Test" mode to automatically number each test.

Include the Test Number in the Result window when using this process. See "Add columns" in the "Customize display" section of this *Directions for use*.

See "Save/Store test results mode" in the screener *Directions for use*.

Test patients

1. Test patients, noting the test numbers that appear on the screener after each test.
2. See the screener *Directions for use* for instructions on using the screener for testing.

Transfer results from the screener to the data manager

To transfer results from the screener to the data manager database:

1. Plug the USB cable connector into an available USB port on the computer and the Micro-USB cable connector into the port at the base of the screener.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.
2. On the data manager, click **Results** to transfer the test data from the screener to the database.
3. In the Results section of the data manager, click **Notes** to add notes to a specific test.

   The notes appear in the printed report.

Transfer results from the screener to the data manager

1. Connect a computer to the screener by plugging the USB cable connector into an available USB port on the computer and the Micro-USB cable connector into the port at the base of the screener.

   The screener displays the message, "Waiting for PC," detects the connection to the computer, and waits for an action or communication from the data manager.

2. If a connection is not detected, click **Detect Com Port** to establish the Com Port connection.

3. Click the **RESULTS** icon to transfer test results.

4. When all data has been transferred, click **OK**.

5. Navigate to the Recent Results tab, and then click the "**Unnamed**" patient to view all transferred tests.

6. On the Records section of the Home tab, click **New Patient** to add patient names and demographic information for patients tested.

7. On the Records section of the Home tab, click **Assign to Patients**, and then drag all unnamed test results on the left side of the window to the appropriate patient name on the right side of the window.

8. Click **OK.**

Review and print patient tests

1. On the Patients tab, select a patient and review all tests.

2. On the Home tab in the Results section, add notes to a specific test. The notes appear in the printed report.

3. Select the tests in the list to be printed, and then on the Print section of the Home tab, click **Print**.

   The Print Preview tab appears.

4. Click **Quick Print** to print one copy of the report.

5. See the "Home tab Print section" of this *Directions for use* for more information on printing options.