Sleepware G3

Database Administration

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The Sleepware G3 database

Sleepware G3 utilizes the Microsoft SQL Server Express Database

- Access to the database, once installed, is integrated within Sleepware G3 and stores patient, physician, and acquisition information (sleep study results and diagnostic information).
- The information stored in the database can be used to run various, customizable clinical, patient data, acquisition information, diagnoses, and assigned physicians queries.

Note: The Sleepware G3 database does not store study data: raw files or video. These are typically stored on a computer hard drive, or other network drive designated for study storage.

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Database Administration

Performing database administration tasks are necessary to keep the database up-to-date, backed up, and secure. Typically these tasks are performed when the database is originally set up and when there is a software update for Sleepware G3. The tasks to be performed to maintain a healthy database are as follows:

- Perform a backup of your Sleepware G3 database.
- Restore the Sleepware G3 database using a backup of a file that was created previously.
- Encrypt your Sleepware G3 database.
- Upgrade your Sleepware G3 database.

The next few slides show how to access the Database Administration tool and perform the backup, restore, encrypt, and upgrade functions.

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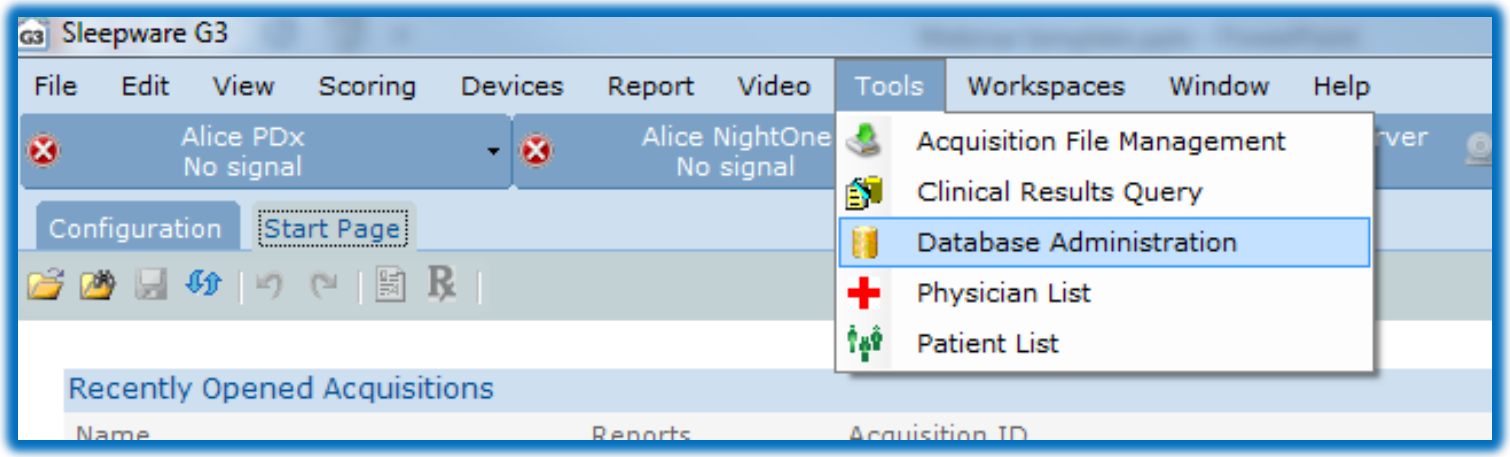
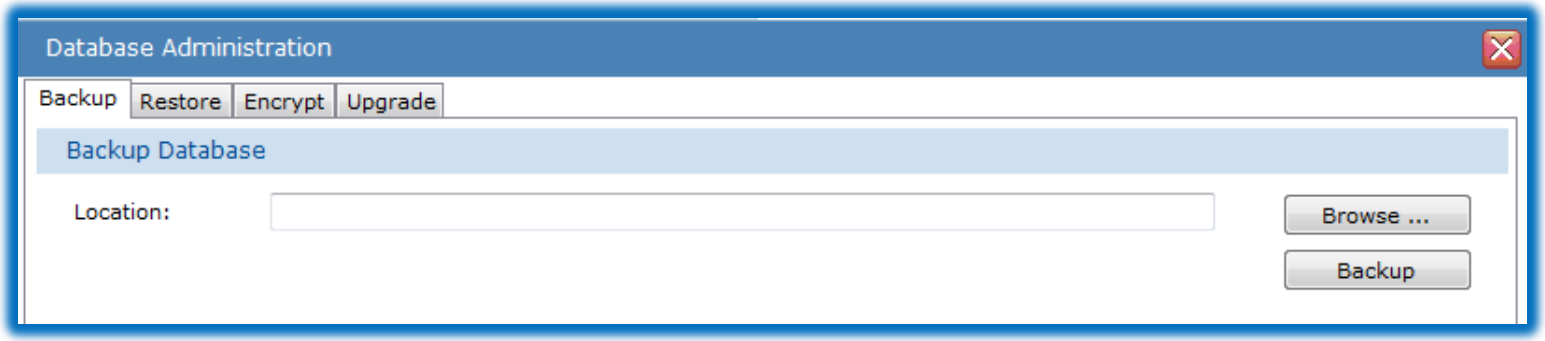
Database Administration

To access the database administration tool: Open Sleepware G3, select **Tools** > **Database Administration**.



This single database tool allows you to backup, restore, encrypt and upgrade your database.



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Database Administration

Prerequisites for database tasks:

- The backup and restore functions can only be used on the computer hosting the database server.
- The Sleepware G3 user has proper Group privileges to run this tool.
- The restore function can only be used when a Windows account Administrator is logged in to the PC.

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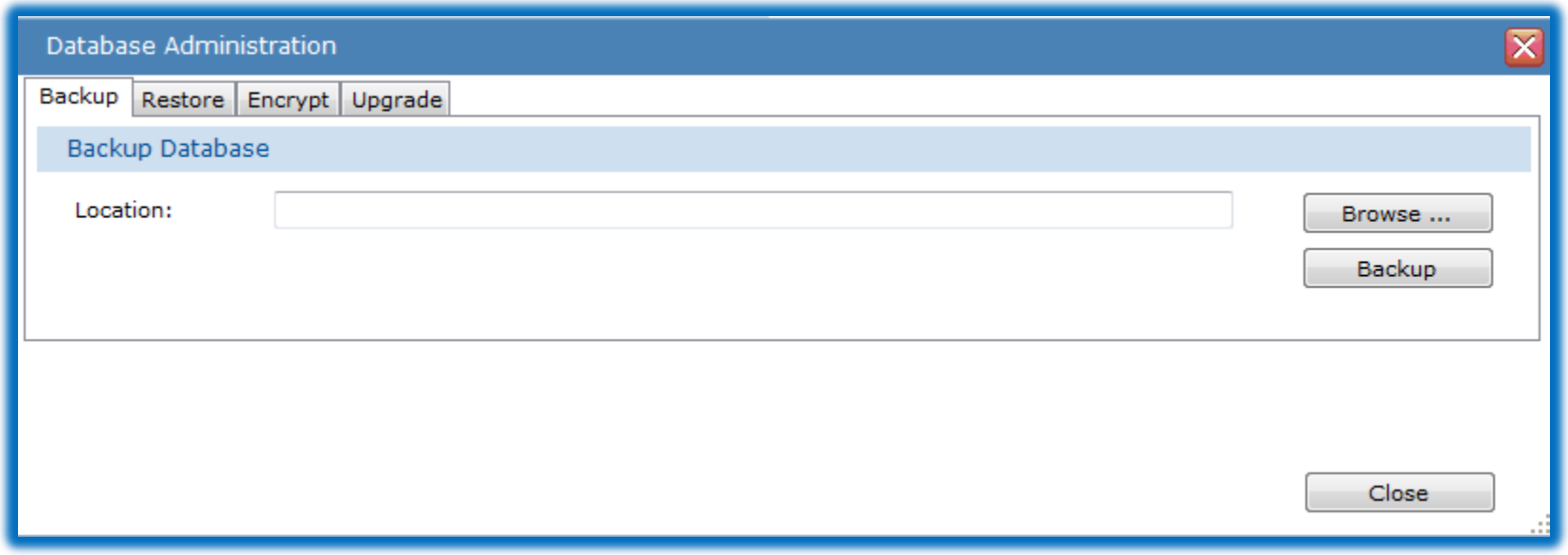
Database Backup



The Database Administration window opens and by default, displays the **Backup** tab selected.

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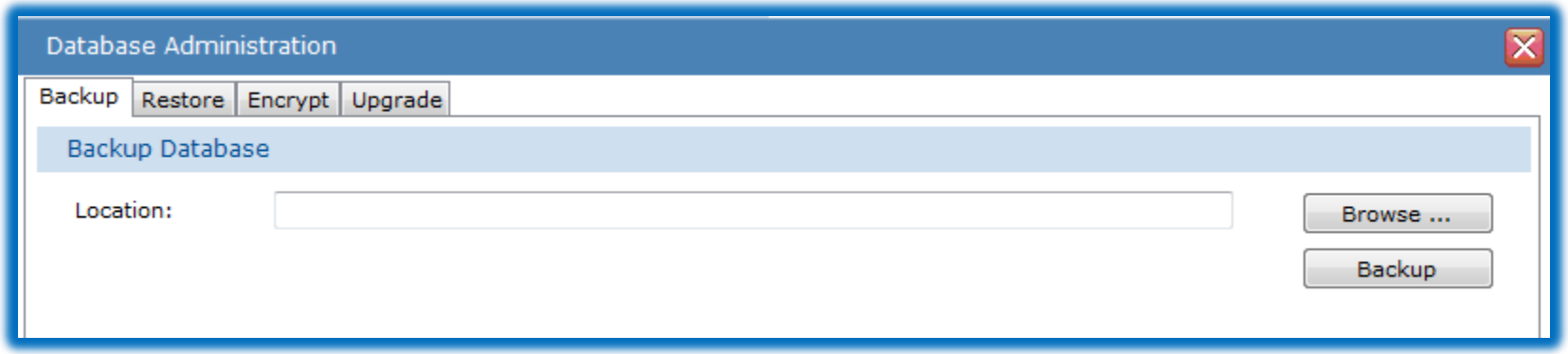
Database Backup



Backing up your SQL Server database periodically protects you from the possibility of data loss. **Backing up is the only way to protect your data.** With valid backups of a database, you can recover your data from many failures, such as:

- Hardware failures, for example, a damaged disk drive or permanent loss of a server.
- Database corruption.

Best practice is to perform a database backup once a month.

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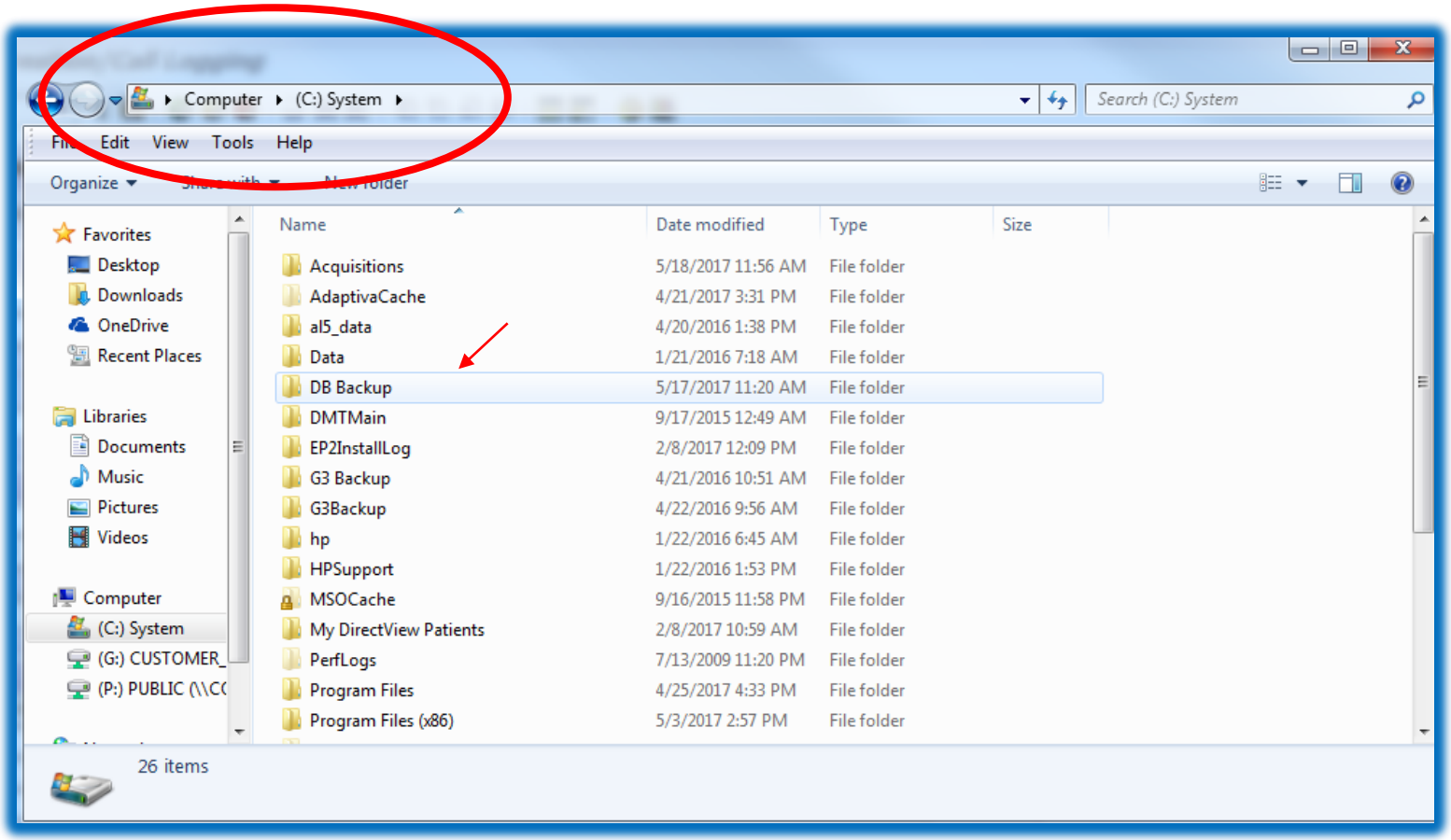
Database Backup



The first step in the backup process is to create a folder to store the data. You can create a folder in the location of your choice. ***Your backup location must be on the same computer your database is located.*** For this example, the folder was created on the local C drive (Computer > (C): System > DB Backup). It was named DB Backup for "database backup"

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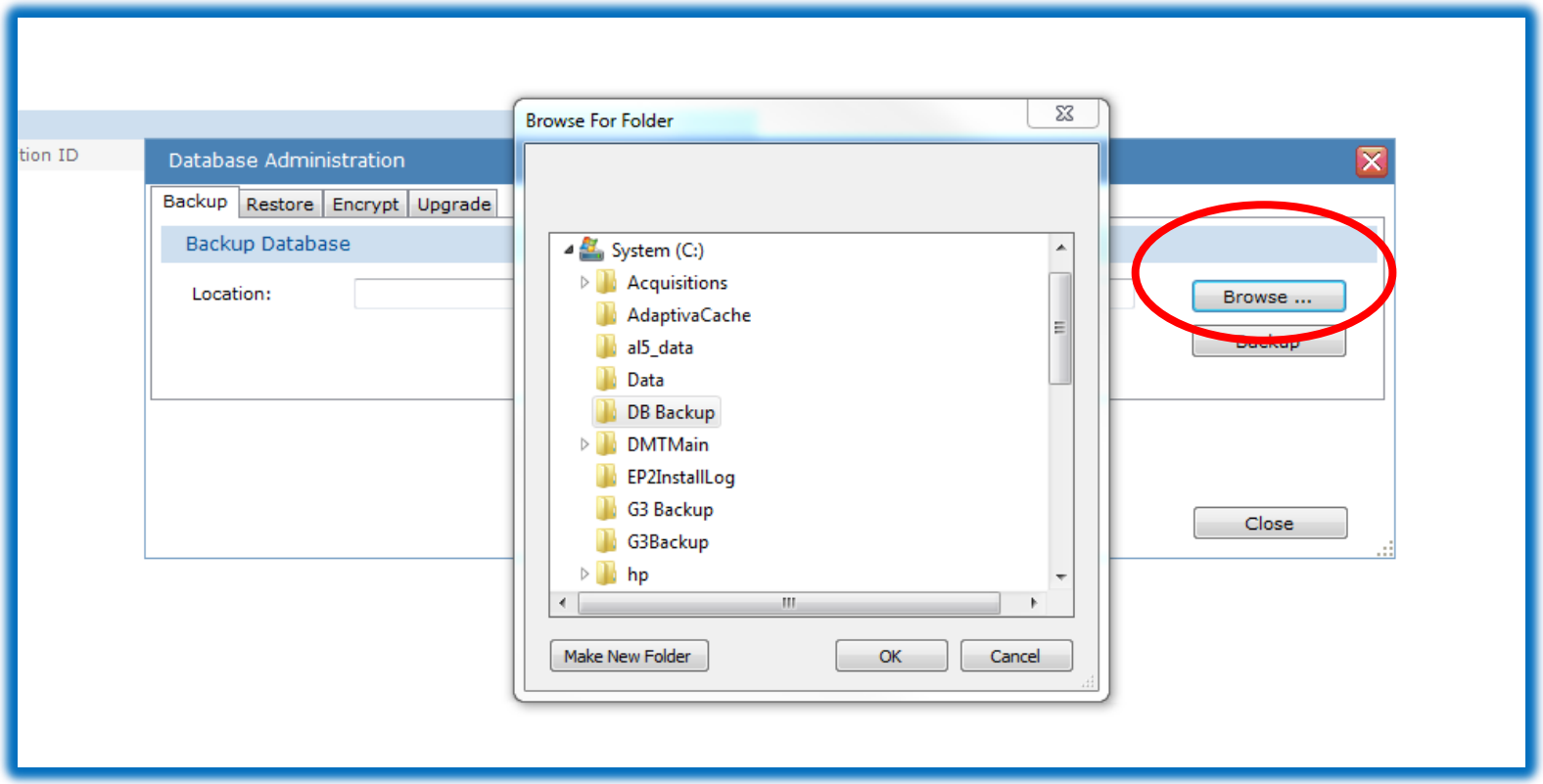
Database Backup



Within the Backup Database tool, click on the **Browse** button. The Browse for Folder window appears. Navigate to the "DB Backup" folder you created previously. Once you have located your backup folder, click to select it then click **OK**.

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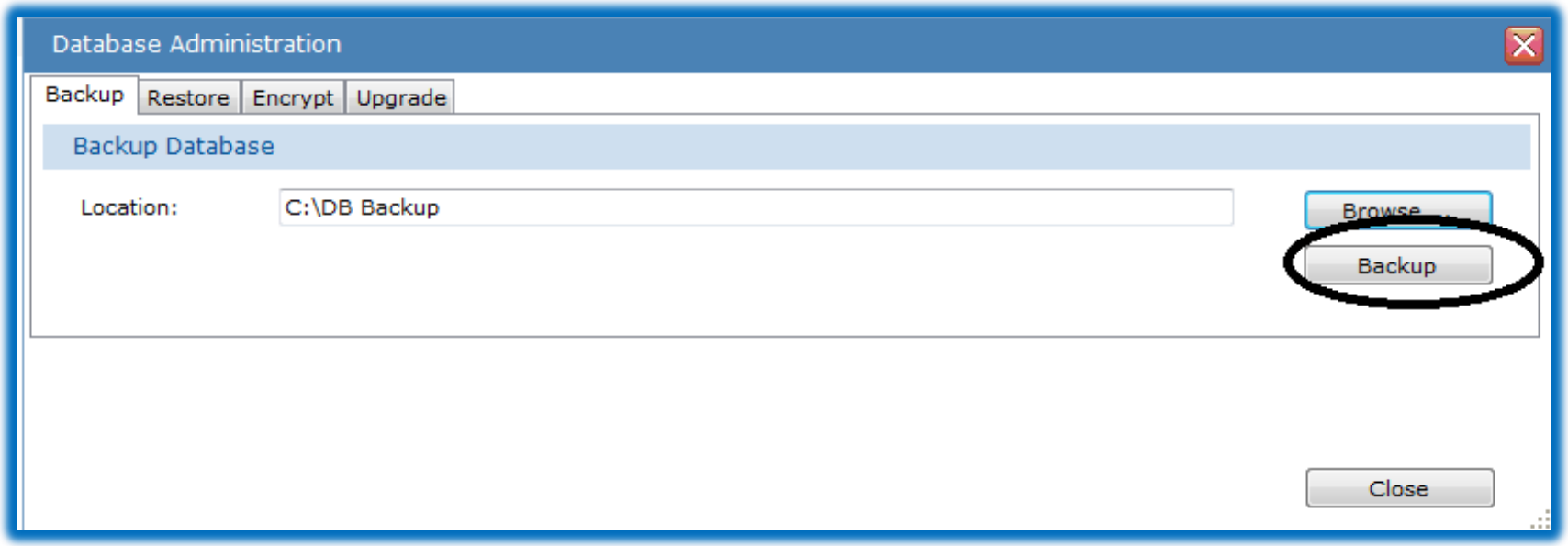
Database Backup



The location is now selected. To back up the DB to this folder, click on **Backup**.

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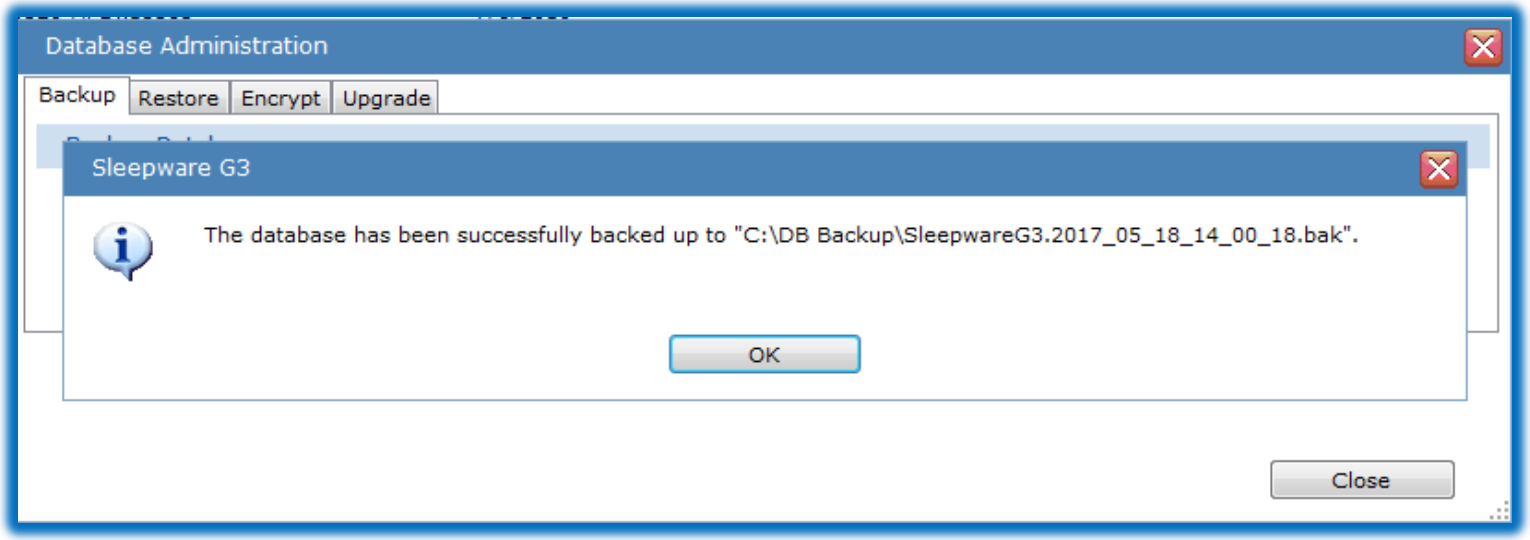
Database Backup



When complete, a message appears that the backup was successful. The backup process creates a .BAK file in the folder you selected. The generated file includes the date and time on which it was created. For example, SleepwareG3.2017_05_18_01_59_30.bak was created at 01:59:30 on May 18 2017.

You have now successfully created a back up of your database.

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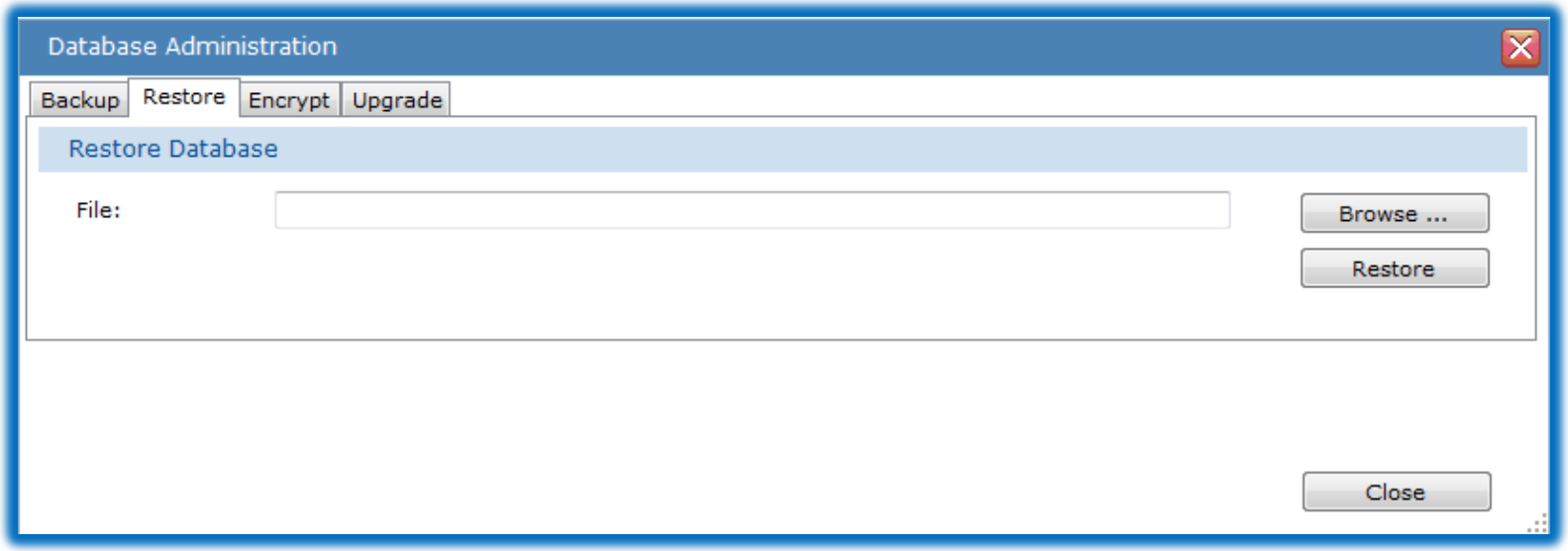
Database Restore

Now that you have created a database backup file, the Restore function can be used when necessary. If the Sleepware G3 database ever needs to be restored, the following steps can be taken.



With Sleepware G3 open, click on **Tools** > **Database Administration**. The Database Administration window appears. Select the **Restore** tab.

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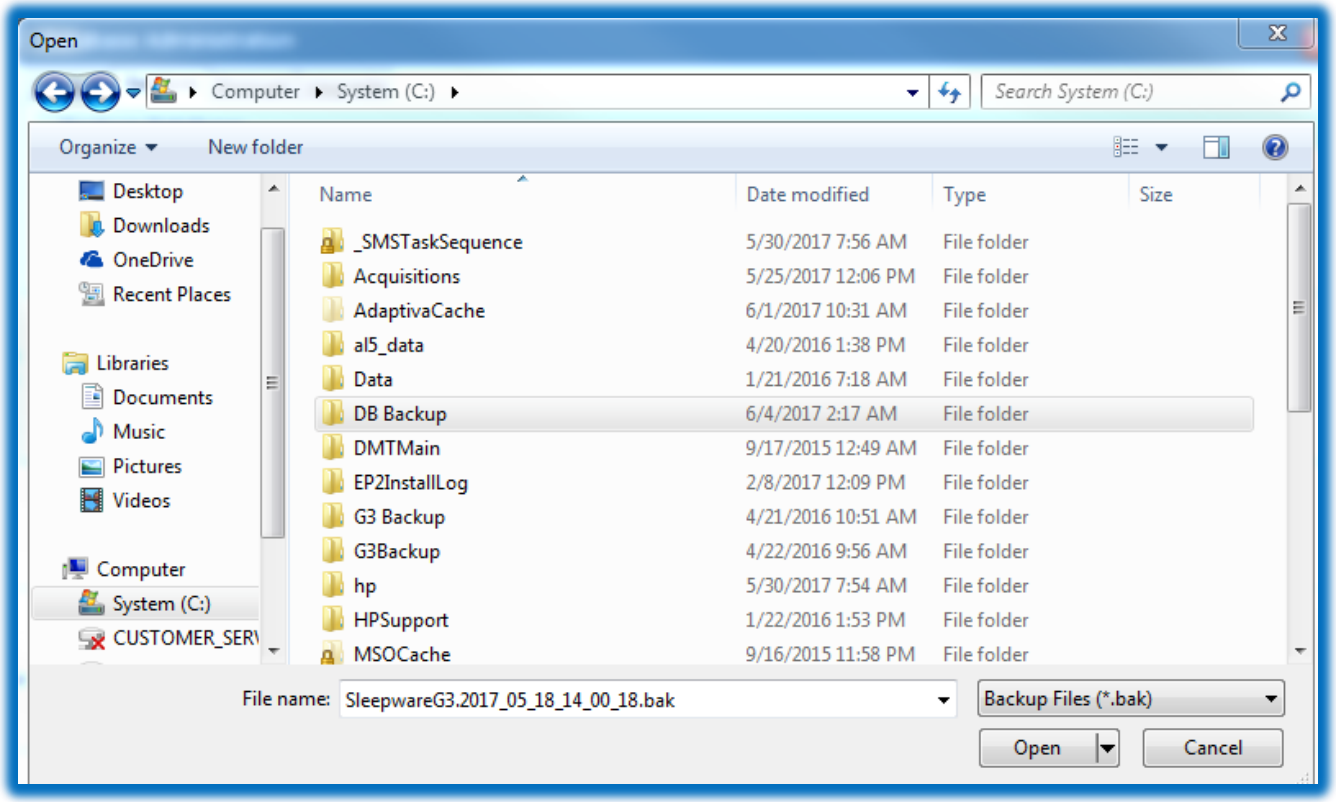
Database Restore



You then select **Browse** and navigate to location of the backup database file you created: Computer > (C): System > DB Backup. Double-click the folder where the .BAK file is stored. This action opens the folder.

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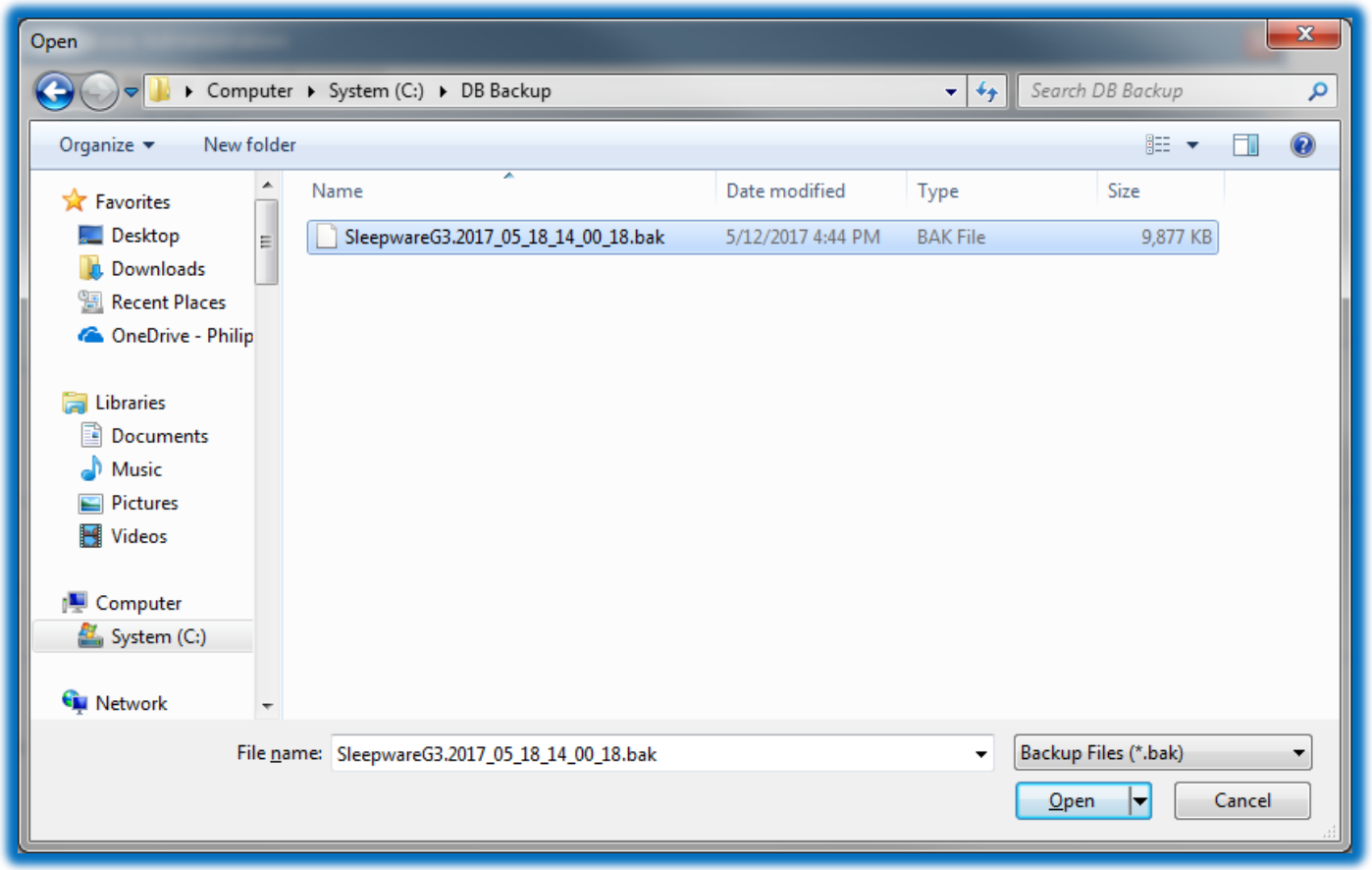
Database Restore



With the backup folder contents displayed, select the .BAK file and click **Open**.

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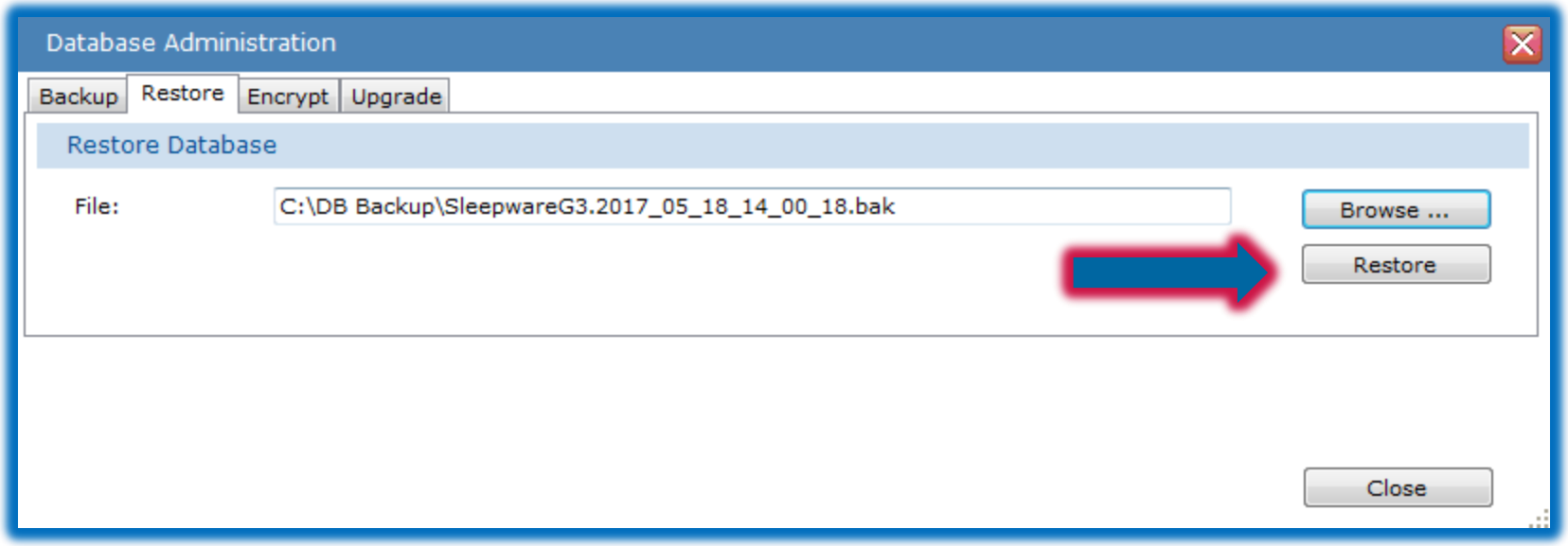
Database Restore



The full path and file name of the backup file is displayed in the Database Administration window.
Example: C:\DB Backup\SleepwareG3.2017_05_18_01_59_30.bak

Click **Restore**.

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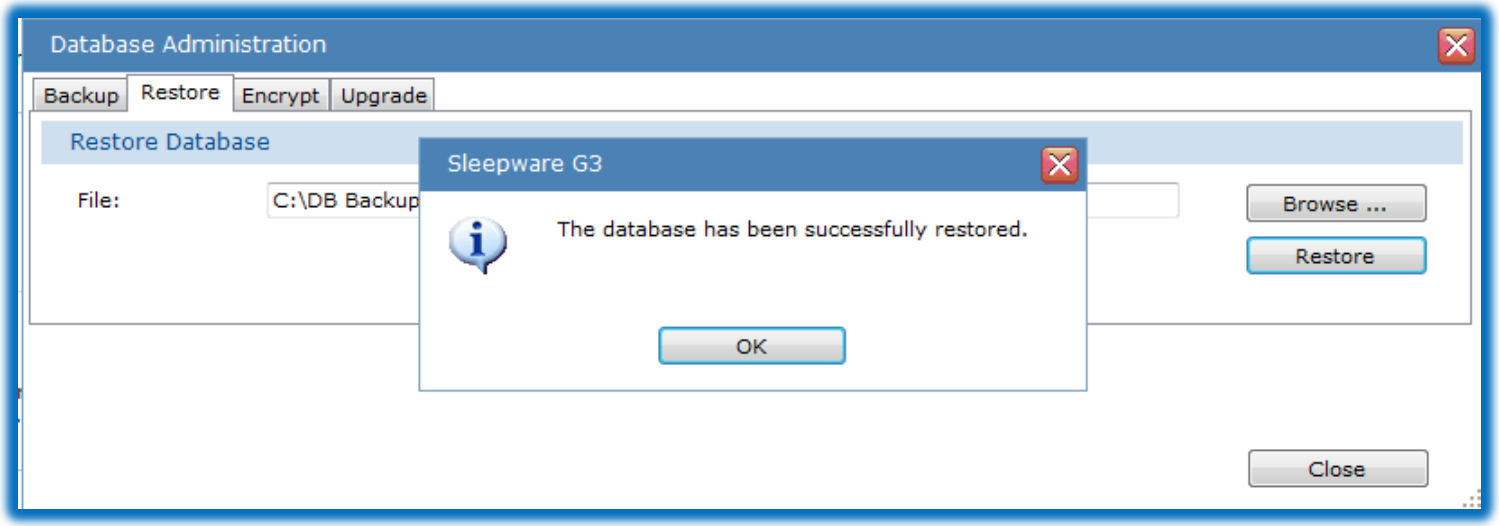
Database Restore



Once the Restore process is finished, a message is displayed: “The database has been successfully restored.”
You have now successfully restored your database.
Note: The data restored is from the date of the backup file.

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Database Encryption

Sleepware G3 database encryption helps prevent unauthorized access to information stored in the database outside of Sleepware G3.

The data that is encrypted includes:
1. Personally identifiable data is encrypted with a FIPS 140-2 certified algorithm.

2. All personal identification data that is stored in the database, including all patient and physician information.

3. Beginning with version 3.9, Sleepware G3 upgrades encrypt the database automatically. If the database was already encrypted a message displays “The database is already encrypted” and the **Encrypt** button is disabled.

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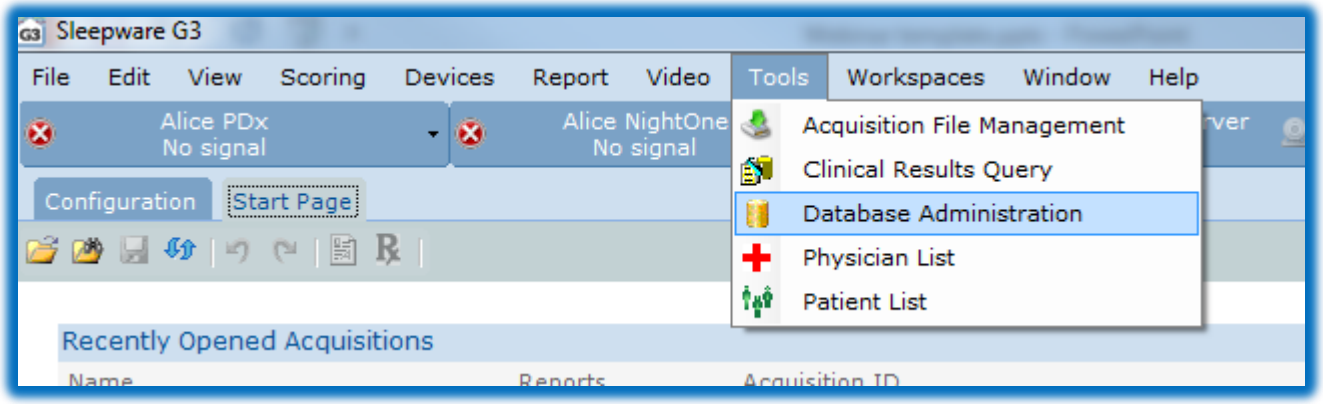
Database Encryption

To encrypt your database



With Sleepware G3 open, select **Tools** > **Database Administration**.

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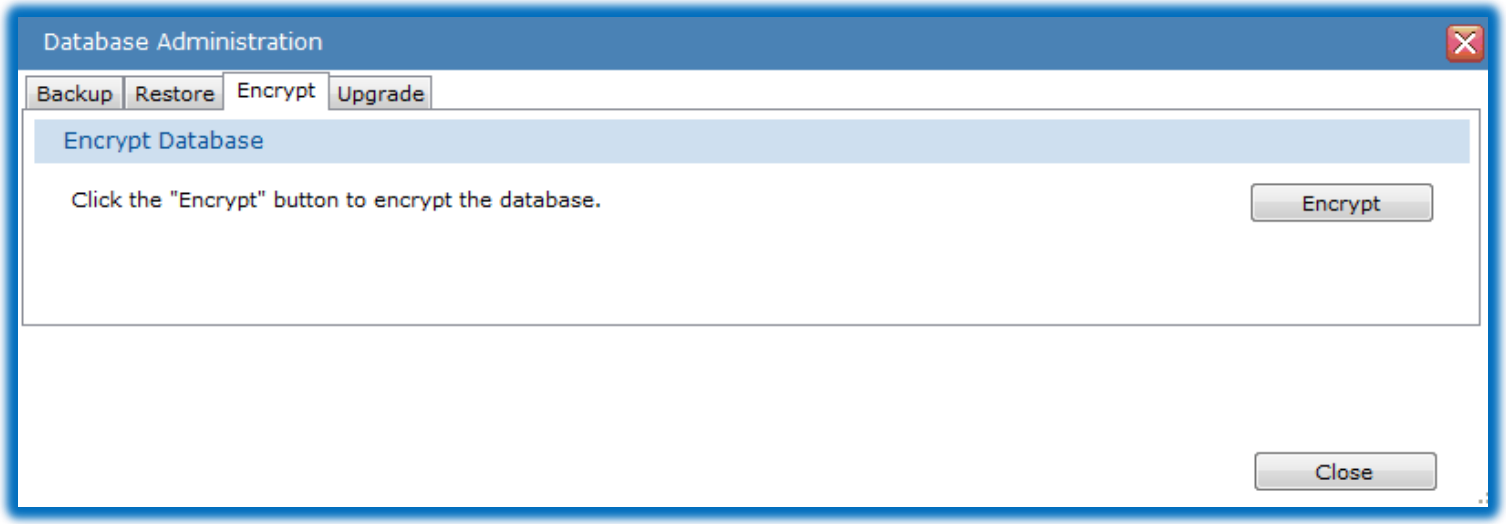
Database Encryption

To encrypt your database



Select the **Encrypt** tab.
Click on the **Encrypt** button.

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Database Encryption

To encrypt your database

When the encryption process is finished, a message appears: “The database has been successfully encrypted.” All patient and physician information stored in the current database is now encrypted.

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Database Upgrades

Upgrades to the database occur in tandem with the installation of a new release of the Sleepware G3 client software. With this upgrade, you do not need to perform a full database installation. However, you will need to update the database to include any changes with a new release of Sleepware G3.

Often, new features require updates to the database. The update function executes database scripts that adds new database tables or adds columns to existing tables.

The update function does not impact any existing data.

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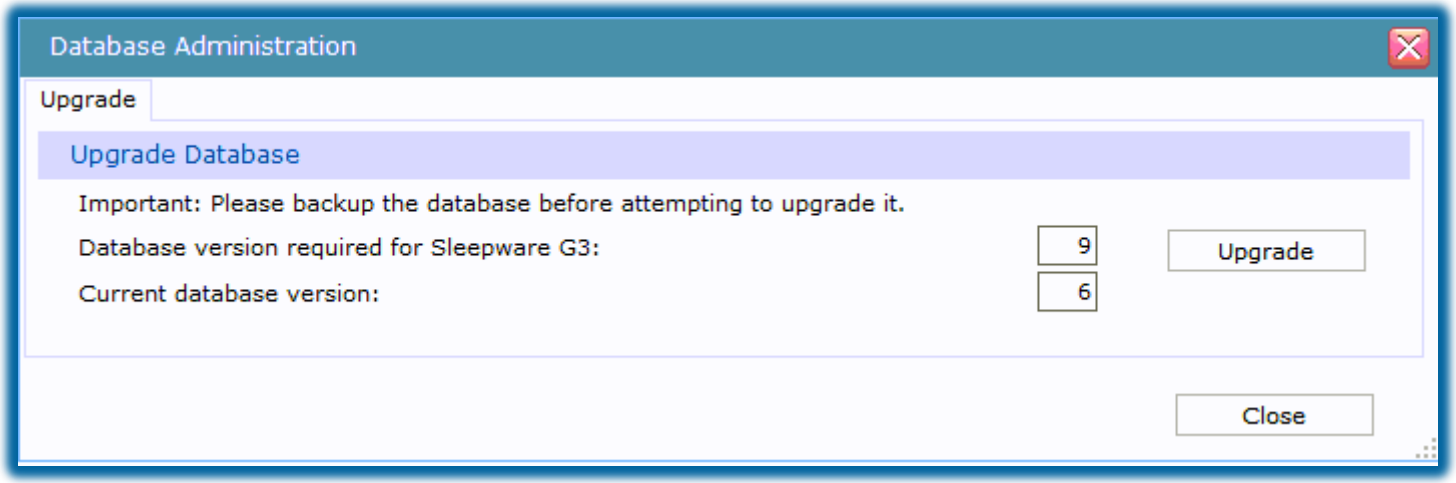
To Upgrade Your Database



Note that this window informs you of the current database version and the required version for the Sleepware G3 version that is installed. In this example:

- The Database version required for Sleepware G3: 9.
- The Current database version: 6

To Upgrade from version 6 to 9, click **Upgrade**.

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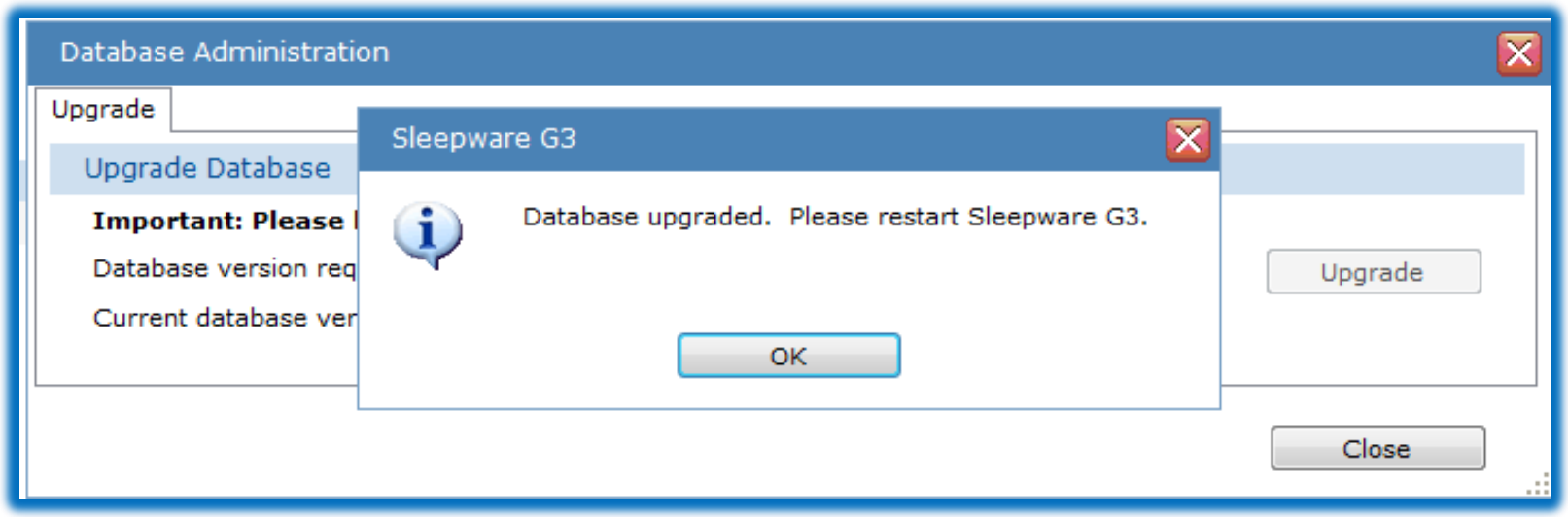
To Upgrade Your Database



When the database upgrade process is complete, a message is displayed: “Database upgraded. Restart Sleepware G3.”

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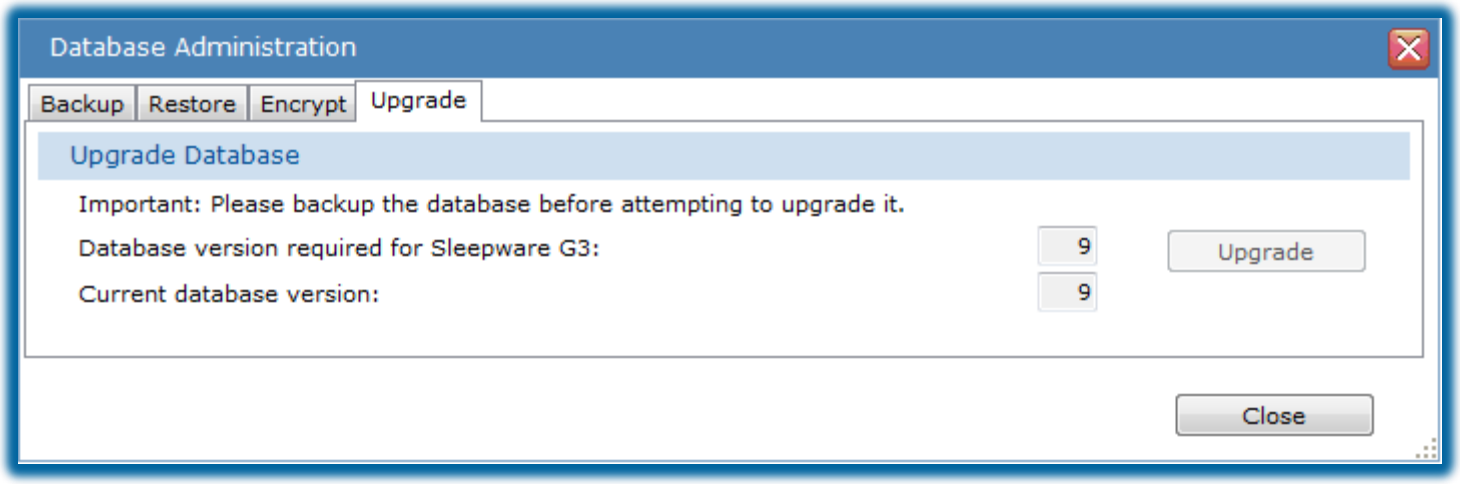
To Upgrade Your Database



After Sleepware G3 has been restarted, you can reopen the Database Administration window to confirm that the two displayed versions now match.

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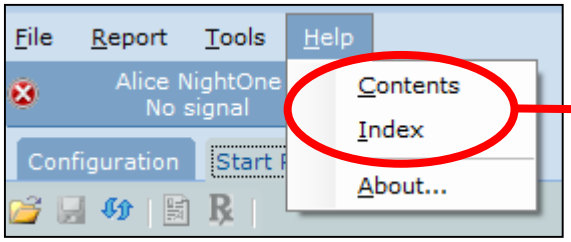
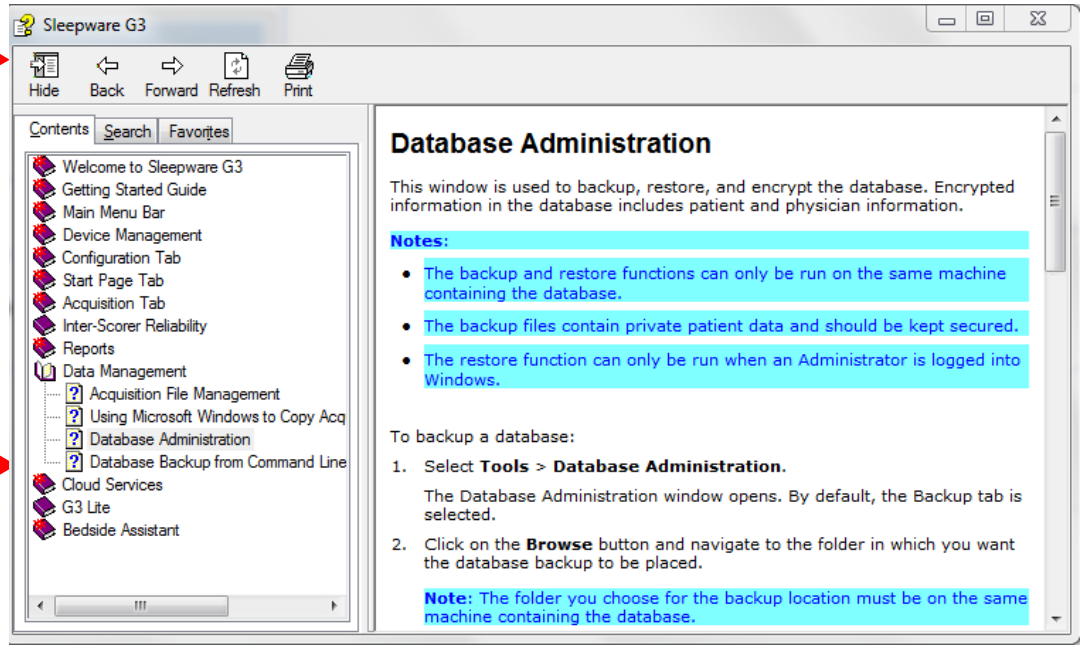
Help!

For more information about Sleepware G3, access the Help file by selecting **Help** in the upper left corner and selecting **Contents or Index**. **OR…** press **F1** on your computer keyboard to display the Help file.





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Thank You

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

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Sleepware G3 Training Module

Somnolyzer Quick Start Guide

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Introduction

New icons for integrated Somnolyzer that appear in Sleepware G3 versions 3.7.1 and later:

Somnolyzer Icons in Sleepware G3

To use Somnolyzer within G3, you must first purchase “licenses for use” from your Philips Respironics representative.

There are two different license type options for purchase: "Respiratory Only" and "Full PSG." The Respiratory Only option allows Somnolyzer analysis of studies performed using our portable sleep testing devices, Alice NightOne and Alice PDx. The Full PSG option allows analysis of our in- lab PSG (Alice 5/LE/6) studies and studies recorded with Alice PDx if EEG and/or ECG is used (any study requiring sleep staging). Examples:

Full PSG license: Alice 5, 6, or Alice PDx (with the optional ExG and/or ECG yoke).

Alice PDx with ExG & ECG Yokes

Alice 6 Systems

Respiratory-Only: Alice NightOne or Alice PDx (without ExG and/or ECG yoke), and Alice PDx with Actimeter yoke.

Alice NightOne

Alice PDx without ExG or ECG Yokes

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

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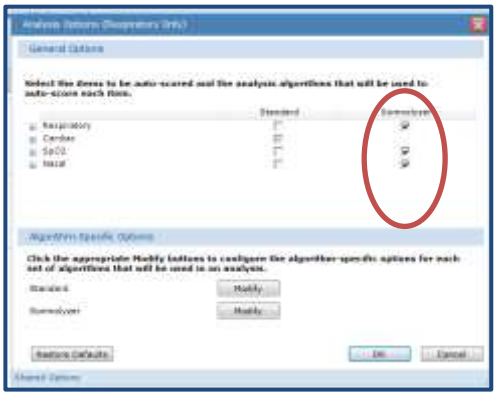
Licenses are available for several different quantities of uses:

Respiratory Only part numbers per quantity		Full PSG part numbers per quantity	
1121153	Somnolyzer-G3 Act., Resp Only, 20 uses	1121056	Somnolyzer-G3 Act., Full, 20 uses
1121154	Somnolyzer-G3 Act., Resp Only, 50 uses	1121057	Somnolyzer-G3 Act., Full, 50 uses
1121115	Somnolyzer-G3 Act., Resp Only, 150 uses	1121148	Somnolyzer-G3 Act., Full, 150 uses
1121156	Somnolyzer-G3 Act., Resp Only, 250 uses	1121149	Somnolyzer-G3 Act., Full, 250 uses
1121157	Somnolyzer-G3 Act., Resp Only, 500 uses	1121150	Somnolyzer-G3 Act., Full, 500 uses
1121158	Somnolyzer-G3 Act., Resp Only, 1000 uses	1121151	Somnolyzer-G3 Act., Full, 1000 uses
1121159	Somnolyzer-G3 Act., Resp Only, 2000 uses	1121152	Somnolyzer-G3 Act., Full, 2000 uses

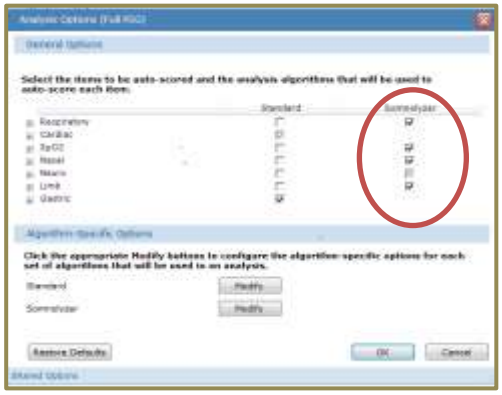
Based on the license type purchased, the applicable Somnolyzer functionality will be available within Sleepware G3 upon license activation (Respiratory Only or Full PSG).

Respiratory Only Analysis Parameters



Respiratory Only analyzes ***respiratory, SpO2 and nasal event types.***
Respiratory only licenses *cannot* be used to analyze Full PSG.

Full PSG Analysis Parameters



Full PSG analyzes ***staging, arousals, respiratory, SpO2, nasal, and leg movement event types***.
Full PSG licenses *cannot* be used to analyze PG studies performed with Alice NightOne or Alice PDx.

The Somnolyzer column for event selection is not visible prior to license activation.

Activating the Somnolyzer License

1. Once you have purchased your license type, you will receive, via post, a serialized license sheet with a Proof of Purchase (POP) code. This POP code must be entered in the Somnolyzer Licensing pop-up window within Sleepware G3.
2. To enter the POP code, double left-click on the Somnolyzer Licensing Icon. In the Somnolyzer Licensing window, enter the POP code and select **Generate a Registration Code**. A Registration Code will be generated automatically.

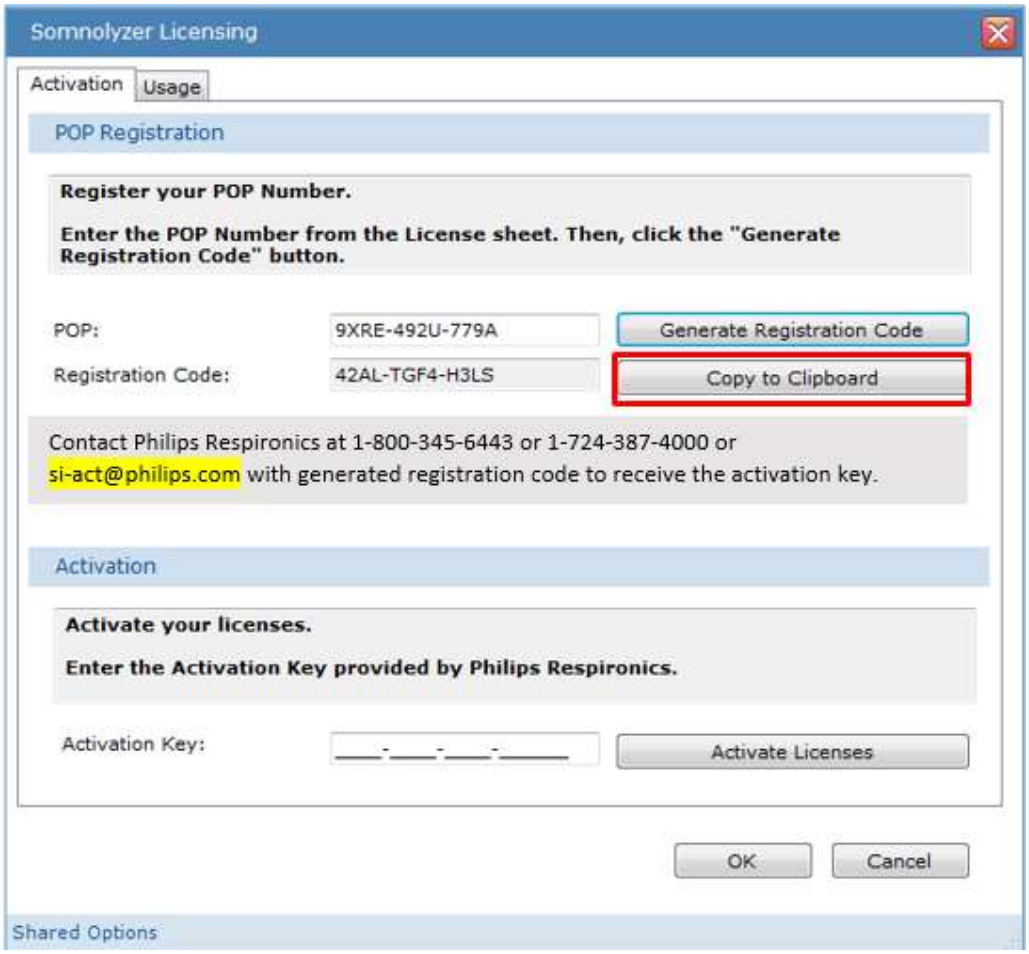
Somnolyzer Licensing Icon in Sleepware G3

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

3. To obtain the activation key, this POP and Registration Code will be emailed to our Philips Respironics automated email address at: si-act@philips.com .

E-mailing steps:

a. Select **Copy to Clipboard**.
b. Open your email application and compose a new e-mail.
c. Enter this address in the "To:" section: si-act@philips.com.
d. Paste the copied information from the Clipboard (step a) by right-clicking in the body section of the e-mail and selecting **Paste** from the pop-up menu or by pressing Ctrl+V on the keyboard.
e. Complete ***ALL*** of the customer information fields (see image on page 4).
f. Send the e-mail.
g. ***If the information you entered is valid, you will receive the Activation Key within minutes***.



Somnolyzer Licensing Window and Steps to Activate Licenses

*Note: You must have emailing capacities from the computer in which you are activating licenses. If you do not, you can call our Philips Respironics Product Support team to obtain the Activation Key.

(North America: 1-800-345-6443, International: 1-724-387-4000)

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

Note: ***You must complete all customer fields in order to receive the Activation Key. The example below highlights the minimum amount of customer information that must be completed:***

From: CustomerName@customeraccount.com
Sent: Wednesday, January 25, 2017 10:33 AM
To: Somnolyzer_Inside_Activation (Functional Account) <si-act@philips.com>
Subject: First SLAP-BOT activation

POP: 9WRE-7D3Z-6A2S
Registration Code: 4LSW-C8F4-H3LS

Please provide following contact details.

Business Name:
Contact Person:
Address Line 1:
Address Line 2:
City:
State:
Country:
Phone:
Fax:
Email:
Website:

4. When you receive the Activation Key, enter it into the space provided. If using e-mail to receive your activation key, you can use the 'Copy and Paste' function to copy and paste the key into the space provided. Once the Activation Key is entered, click on **Activate Licenses**.

A successful activation message will display showing the type and number of licenses purchased.

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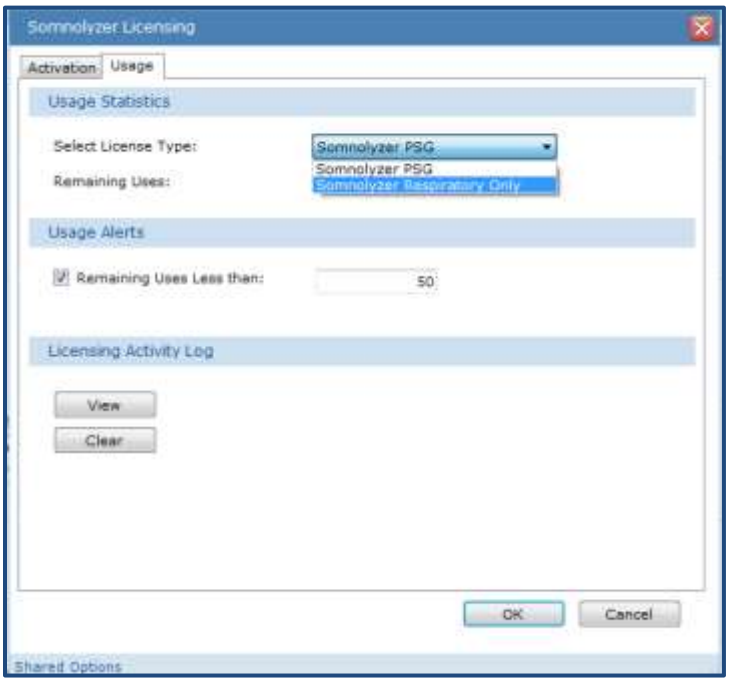
Viewing Somnolyzer Licenses and Setting Alerts

1. To view this activation and your license activity, select the **Usage** tab within the Somnolyzer Licensing window. The Usage tab allows you to view license activity.
2. To view the Activated **License Types,** click on the **Select License Type** drop-down list. In this example, both Somnolyzer PSG and Somnolyzer Respiratory Only license types have been activated:



Somnolyzer Licensing Window Usage Tab

3. Once the **License Type** is selected from the drop-down list, the ***remaining number of uses*** are displayed.
4. You can choose to set a "Usage Alert" limit by selecting the check box next to "**Remaining Uses Less than**," and entering the desired number in the space provided. When the number of remaining licenses drops below this limit, a message is displayed by Sleepware G3. This is a reminder to order more licenses.
5. The License Activity Log displays all licensing activity. Select **View** to see license types activated, acquisitions that have been analyzed, the Sleepware G3 user, and the date and time of the activity.
6. Select **Clear** to erase the activity log

Somnolyzer Analysis in Sleepware G3

PG (Alice NightOne and Alice PDx) studies are analyzed by Somnolyzer upon import. The Respiratory Only Analysis Parameters are applied. The results are available within minutes of download.

For a Full in-lab PSG, the Somnolyzer analysis occurs in ***real-time*** and includes sleep staging, leg movements, nasal, respiratory, and desaturation event scoring. This scoring provides high quality staging and event scoring that allows the night tech to easily track an ongoing tally of sleep efficiency and sleep time as well as event summaries such as RDI, AHI, and leg movements on the Summary Information Panel. There will be an approximate lag of 7-8 minutes in scoring from current time as Somnolyzer thoroughly analyzes and evaluates the signals for scoring. The confidence trend appears within minutes after the study has ended.

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

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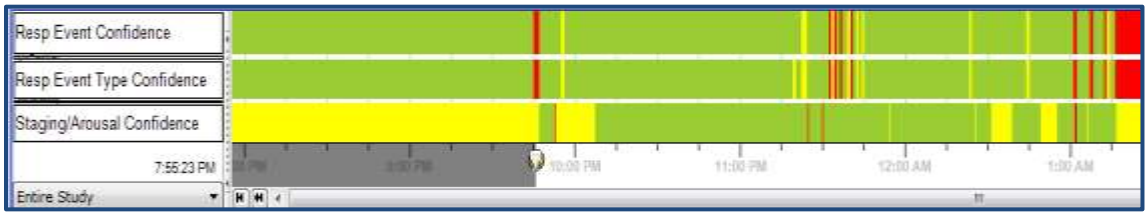
Set Lights Off and Lights On during testing to ensure the sleep time and efficiencies are tallied from this moment. To set Lights Off and Lights On, use the icon on the toolbar or right-click on the Raw View window to choose the Lights Off or Lights On time stamps from the dropdown menu at the appropriate times.

When analysis by Somnolyzer is complete, a color-coded Confidence Trend is produced to guide a clinician to areas of a study that need a more careful review. The scoring of Somnolyzer in areas indicated as green is highly plausible and so can be the confidence in the scoring. Areas of a study coded red, warrant a closer review of the raw data for the accuracy of the scoring.

For Respiratory Only, there are 2 confidence trends available: Respiratory Event Type Confidence and Respiratory Event Confidence.

For a PSG study, there are 3 different confidence trends available: Staging/Arousal Confidence, Respiratory Event Type Confidence and Respiratory Event Confidence.



Example of Full PSG Confidence Trend

Green = High Confidence. The scorer can be confident that this portion of the study had quality signals for reliable scoring. Minimal attention when viewing the raw data is required and a fast scrolling speed can be applied.

Yellow = Moderate Confidence. The scorer can be moderately confident that this portion of the study had quality signals for scoring. Moderate attention is required when reviewing the raw data.

Red = Low Confidence. A detailed epoch-by-epoch review of the raw data is recommended in red areas.

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Sleepware G3 Training Module

Alice NightOne Quick Start Guide

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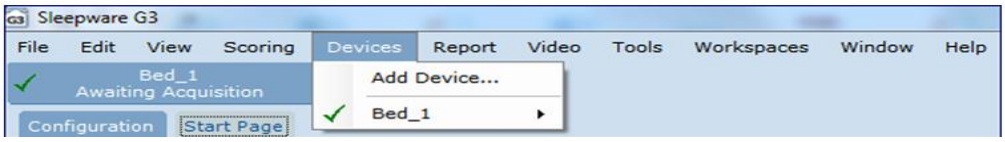
Preparing the Device

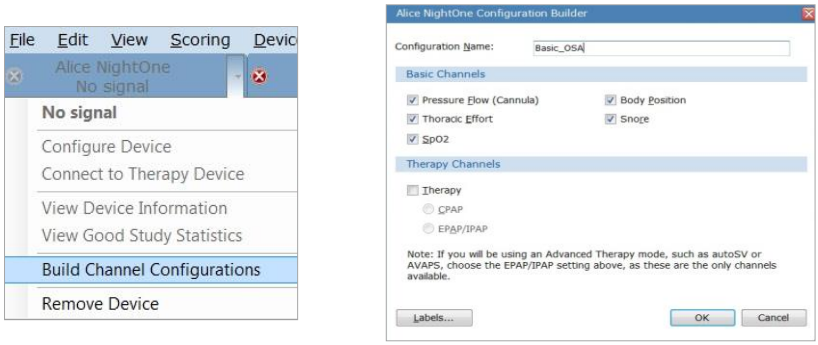
1. Remove battery cover from the back of the Alice NightOne device.
2. Place the Oximetry Module connector into the connection on the Alice NightOne device (bottom left corner).
3. Secure the cable in place with the screw provided.
4. Insert 2 new AA batteries with (+) ends matching (+) symbol on the bottom of the battery chamber (batteries not included). (Battery Life: 10-12 hours of recording)
5. Next, add the device to Sleepware G3 by connecting one end of the USB cable to the Alice NightOne device, and the other end to the computer running Sleepware G3. Sleepware G3 will automatically detect the device and add it to the toolbar. It will remain there until removed manually. Or, you can add it manually by selecting **Devices** on the Sleepware G3 toolbar. Then, **Add Device**>**Alice NightOne**>**OK**.



Adding the Device to Sleepware G3

Create Configurations

Use the Build Channel Configurations tool to create your configurations/list of channels to be recorded. (The Alice NightOne device does not have to be connected to the computer to create your configurations/list of channels. Your selections will be stored on your computer.) The configuration files are located by default: (Windows 7) C:\ProgramData\PhilipsRespironics\SleepwareG3\Configuration\AliceNightOne



Creating your Configurations

You can create configurations for basic diagnostic testing as well as for therapeutic testing. Alice NightOne can connect wirelessly to any Philips Respironics (CPAP, BiPAP, autoPAP, AutoSV and AVAPS) device having *Bluetooth®* capability, including available Philips Respironics devices with the *Bluetooth* Accessory Module installed or internal *Bluetooth* functionality.

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

PHILIPS

Loading Information onto the Device for a Study

1. Remove the battery cover on the back of the Alice NightOne device.
2. Connect one end of the USB cable to the Alice NightOne device.
3. Connect the other end of the USB cable to the computer with Sleepware G3 installed.
4. Sleepware G3 will automatically detect the connection and, after a short while, go from **No Signal** to **IDLE**. The Good Study Indicator (GSI) will illuminate, as shown in the image on the right below, letting you know communication with the device has been successfully established.

Loading Configuration and Patient Information onto the Device

5. Click on the dropdown arrow on the Alice NightOne toolbar, and select **Configure Device.**
6. Add Information under the tabs: Main, Patient Stats, Auto Start, and Good Study Indicator.
   **Note: Patient Information cannot be edited post-acquisition unless the database is connected.*
   - Tab 1: "Main"
     - Enter the patient's name, birth date, gender, and Patient ID.
     - Select the desired configuration.
     - View the device storage status (internal memory).
   - Tab 2: "Patient Stats" - Enter the patient's height and weight (BMI is auto-calculated).
   - Tab 3: "Auto Start" - (Since Alice NightOne has Auto-On feature, only under unusual circumstances is there a need for Program Start.)
   - Tab 4: "Good Study Indicator (GSI)"
     - Enable GSI.
     - Indicate Good Study Target Duration.
     - Select Channels to be evaluated for GSI.
7. Click the *Send* button. The information will be sent to Alice NightOne. If a diagnostic configuration is used, the device is ready for testing!

PAP Configuration

8. If a PAP configuration is being utilized, keep Alice NightOne connected to the computer in the **IDLE** status.
9. In Sleepware G3, access the dropdown menu for Alice NightOne in the device display area. Select **Connect to Therapy Device**.
10. Select the type of wireless connection**: Bluetooth via Bluetooth Accessory Module** or **Bluetooth built into CPAP**. If you choose **Bluetooth via Bluetooth Accessory Module**, enter the last 4 digits of the accessory module serial number in the space provided. If you choose **Bluetooth built into CPAP**, enter the last 4 digits of the therapy device serial number.
11. Select **OK**.
12. When both devices are powered on, they can be synched. Follow the *Bluetooth* Accessory Module pairing instructions to initiate this synchronization. For Alice NightOne, all that is necessary is to power

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

on the device. The wireless connection icon on the Alice NightOne device will be solid green when it is successfully paired to the therapy device

Retrieving Data from Alice NightOne after a Study

1. Remove the battery cover on the back of the Alice NightOne device.
2. Connect one end of the USB cable to the Alice NightOne device.
3. Connect the other end of the USB cable to the computer with Sleepware G3 installed. (Studies are stored on the internal memory of Alice NightOne. The device has a 4 GB memory with average study sizes of 50 MB).
4. Sleepware G3 will detect the Alice NightOne for download, and show a message stating, “Entering download mode.” If this does not happen automatically, select **File**>**Import**>**Alice NightOne data**. The Alice NightOne Download Utility will open showing the studies contained in the device memory.
5. Place a check mark in the box in the “Import” column for the patient whose study you would like to import.
6. Select **Import**. You will get an import status message and a message stating the download was successful.
7. If importing one patient only, this study will open in Sleepware G3. If importing multiple studies, the patients will appear on the Start Page of Sleepware G3. Double click on the patient name to open the recorded study and begin scoring.

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

PHILIPS

PHILIPS

G3 Training Module

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version

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WHAT IS CAPNOGRAPHY?

Capnography is:

- Used in diagnosis of complex patients
  - Obesity Hypoventilation Syndrome
  - COPD

We've made it simple as a USB plug!

REORDER NUMBER

1101087	**Alice, LoFlo starter kit** (LoFlo, sampling line 10 pk, Alice LoFlo USB cable, and cannulas)

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SETTING UP LOFLO FOR ALICE

System Requirements

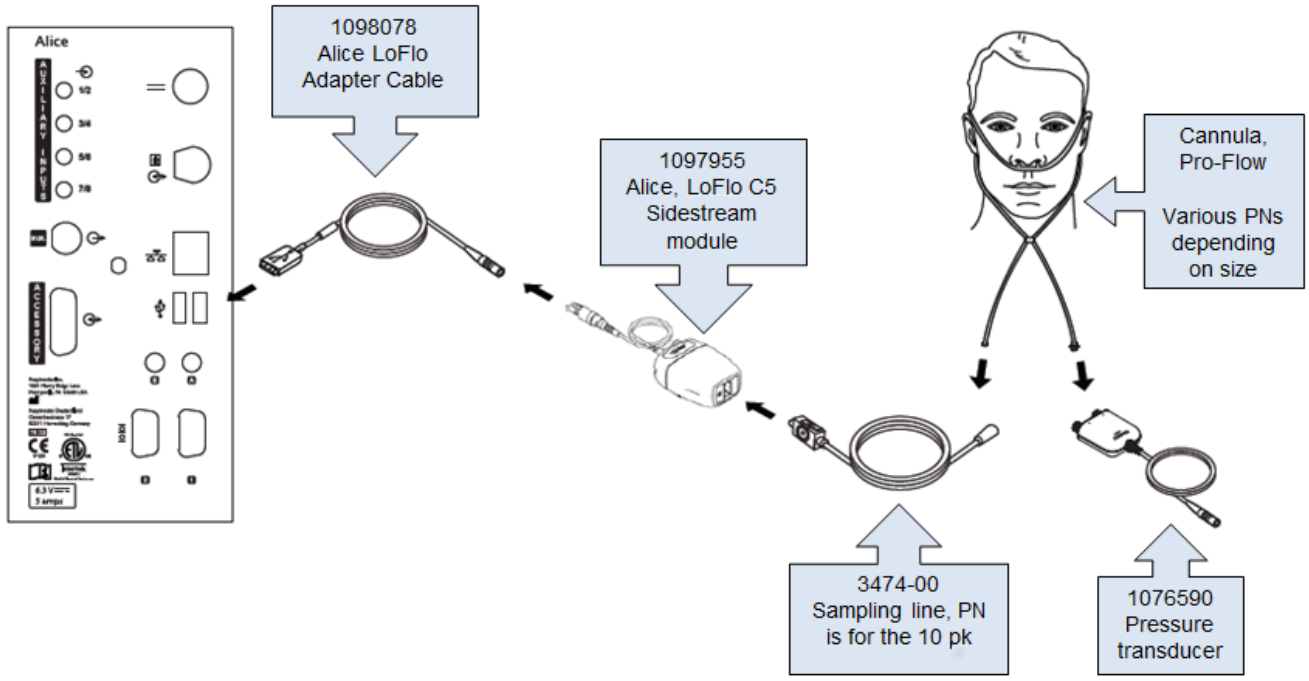
Alice 6 PSG system

- Sleepware G3 v3.3.1 or higher
- Alice 6 firmware R6 or higher

Alice 5/LE PSG system

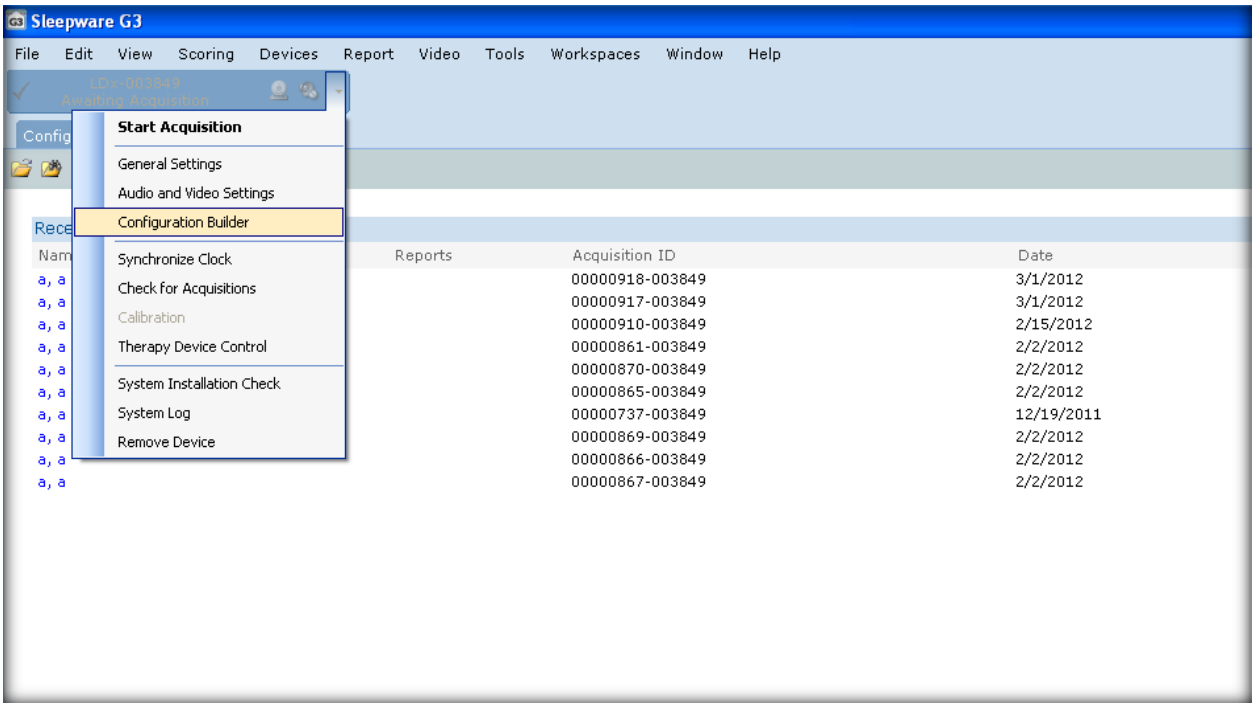
- Sleepware G3 v3.3.1 or higher
- Alice 5/LE firmware v 1.9.0 or higher (available May 2013

Connecting LoFlo to Alice

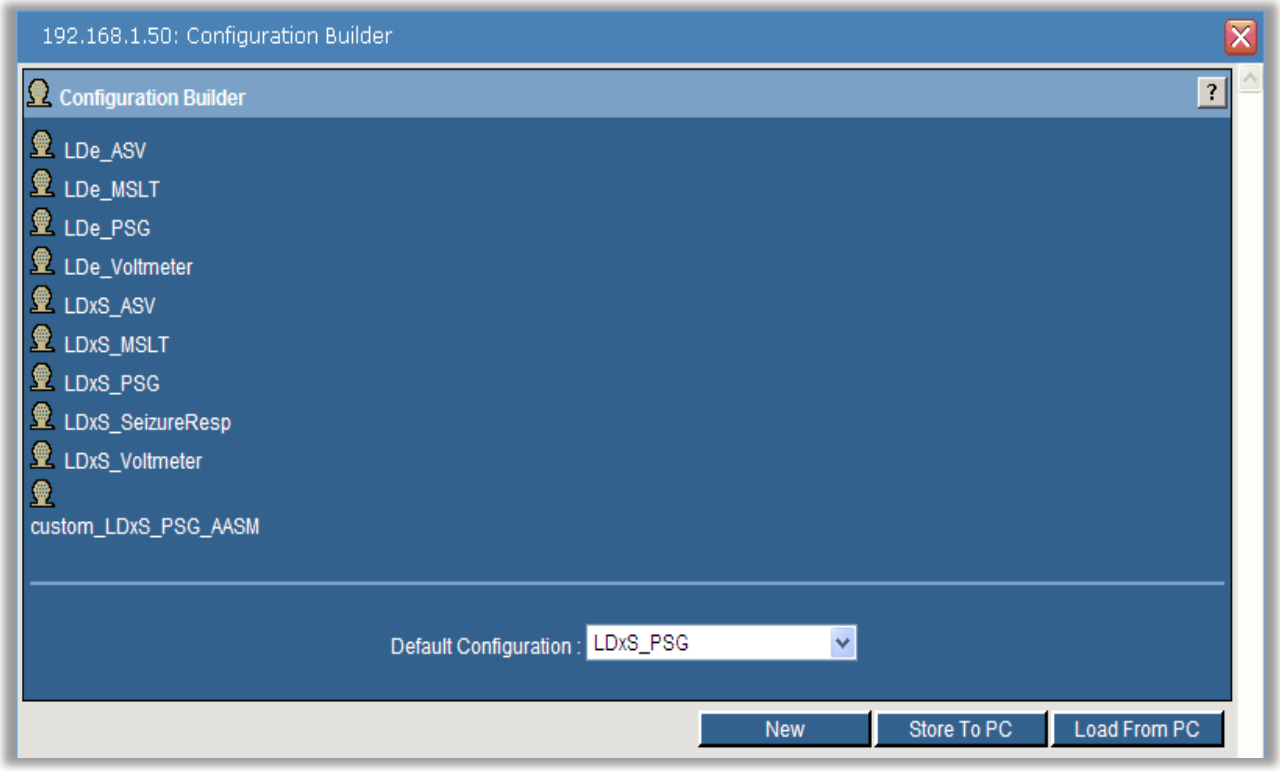


PHILIPS

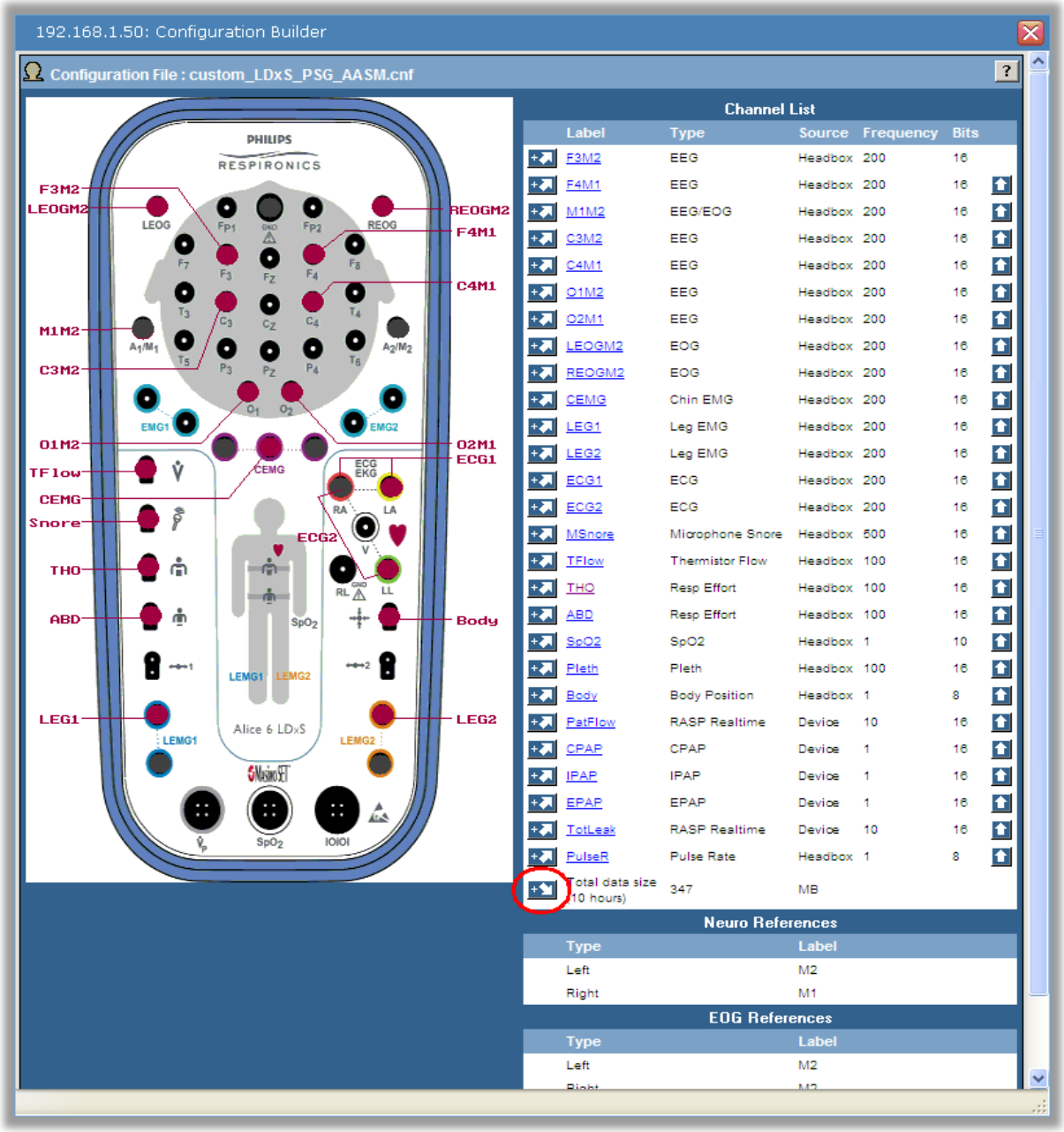
Open General Settings from Sleepware



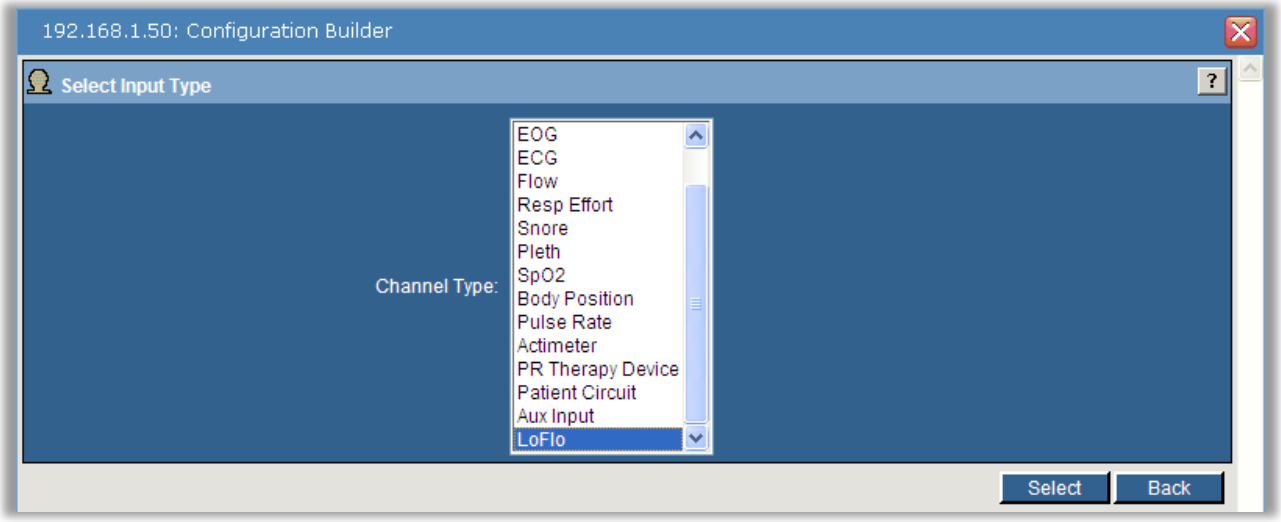
Choose a Configuration to Edit



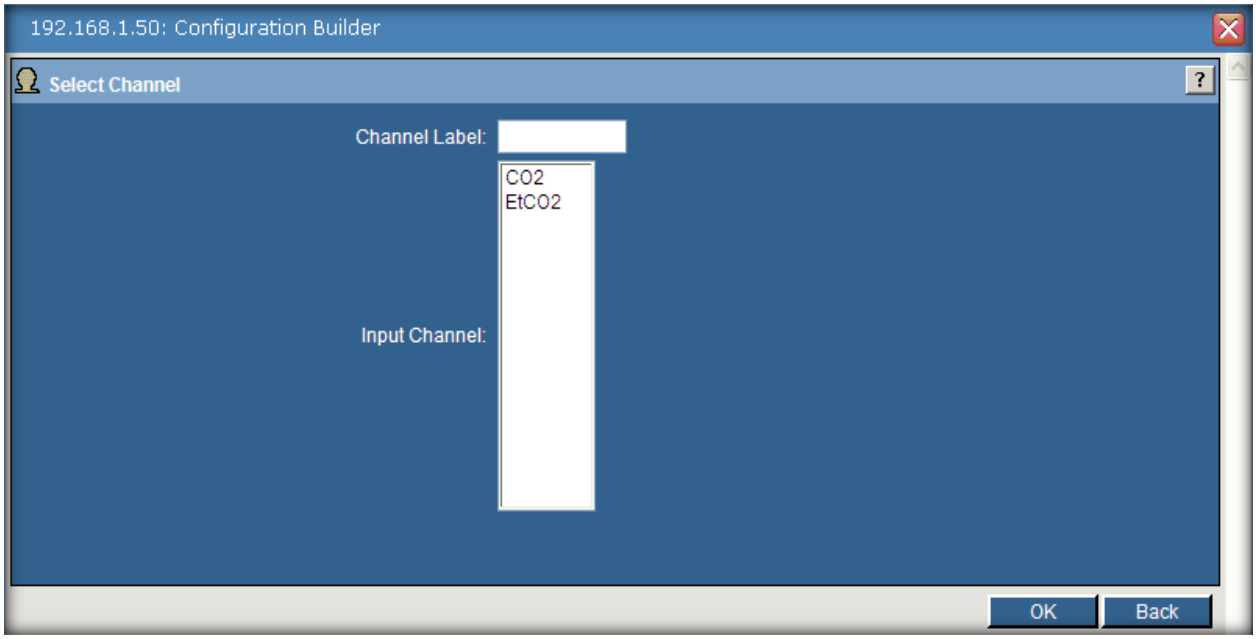
Click the insert arrow at the bottom of the channel list.



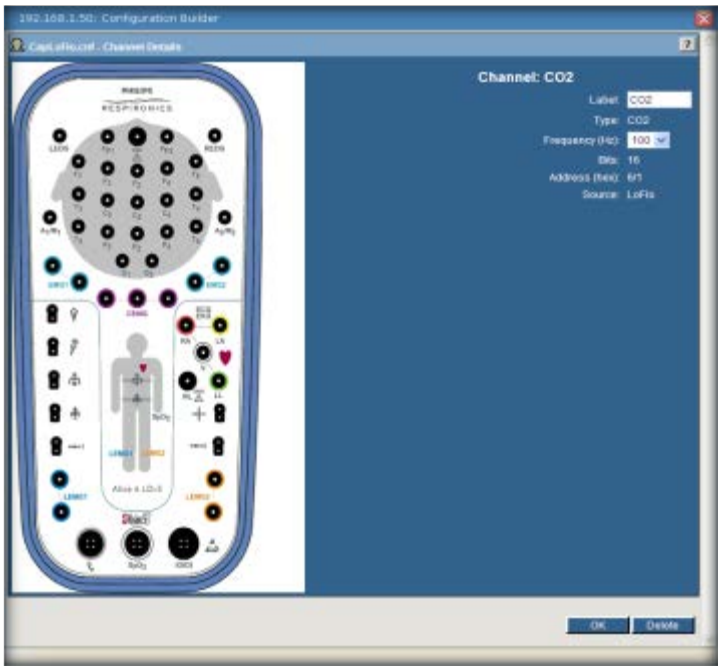
In the Select Input Type window, scroll to the bottom of the Channel Type list, click on LoFlo, and then click the Select button.



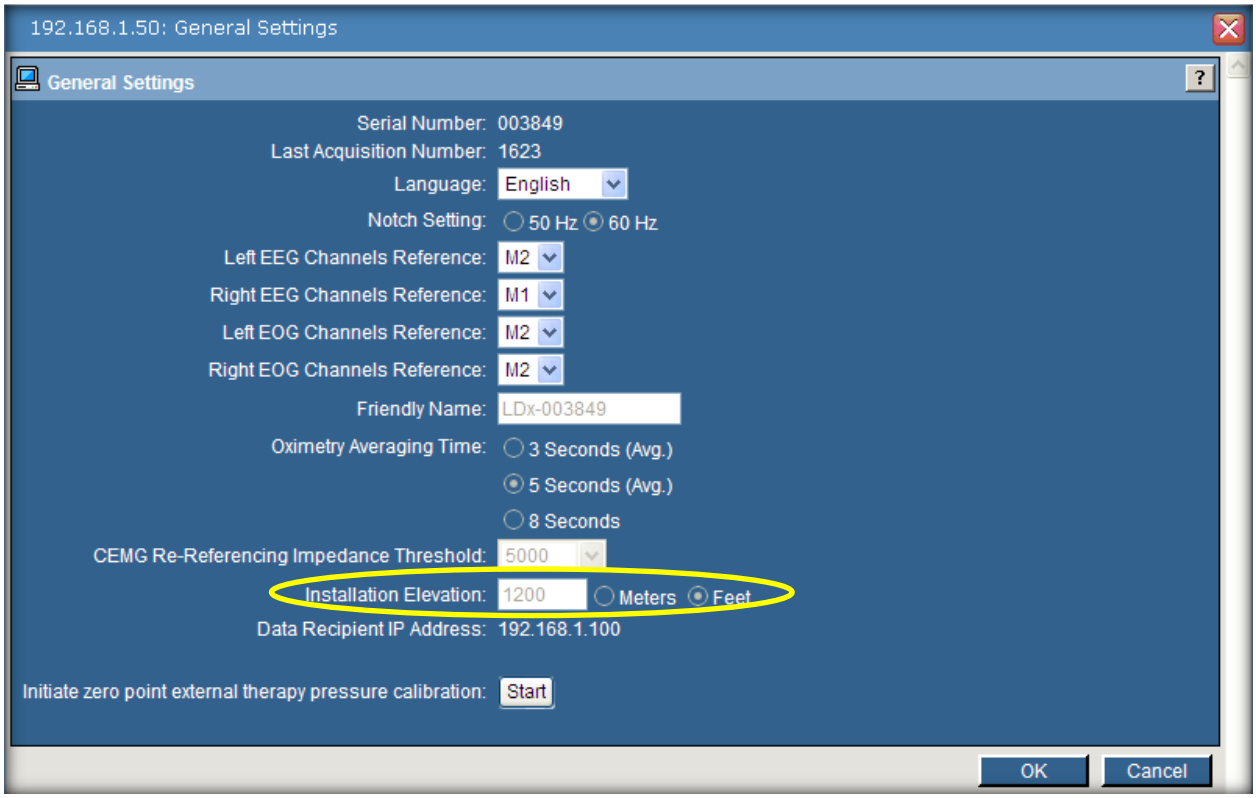
Choose CO2 from the submenu then enter a channel label name and click the OK button.



Enter custom name for channel label if desired. Repeat for EtCO2 channel.



Go to the General Settings page of the Base Station and enter Elevation.

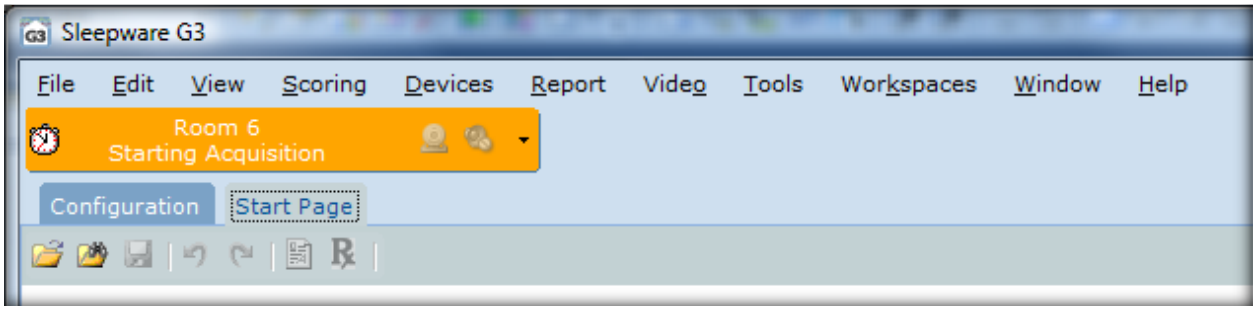


PHILIPS

USING THE LOFLO SENSOR WITH SLEEPWARE G3

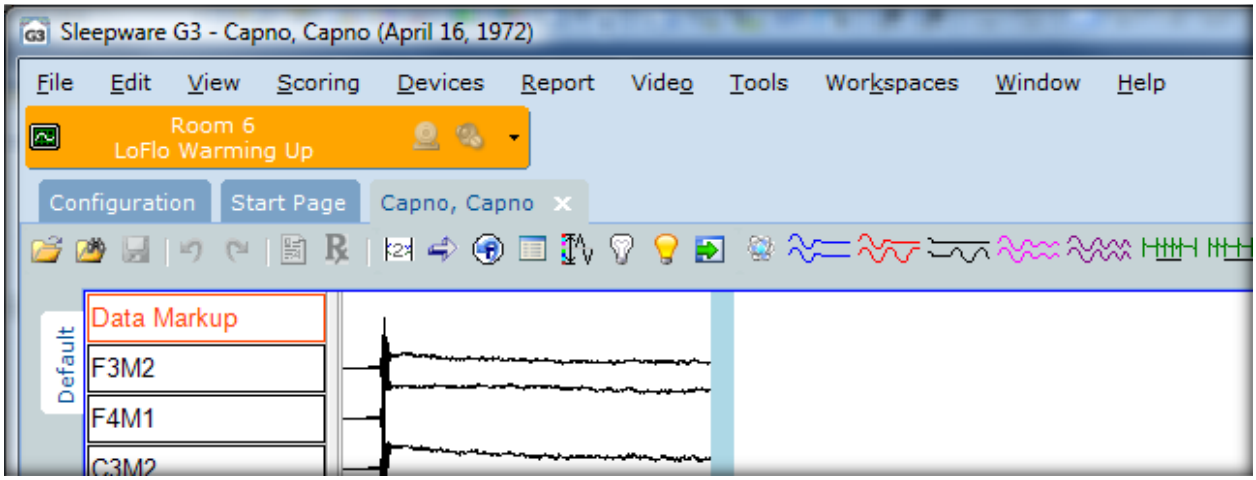
Starting an Acquisition

- Start an acquisition normally.
- If there is a LoFlo channel in the configuration, the device button will show “Starting Acquisition” and turn orange.



Warming up

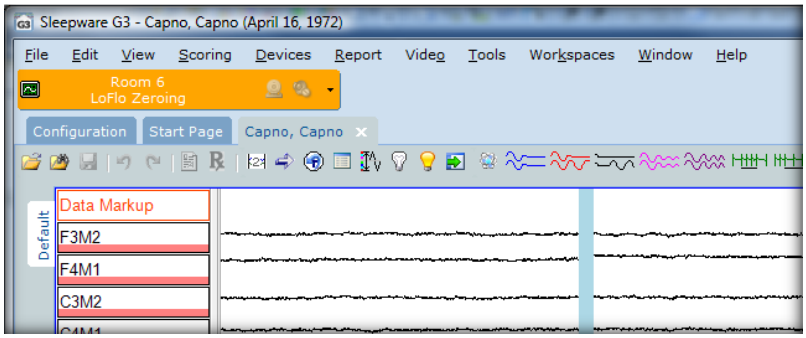
- Once the acquisition is running, the LoFlo takes 30-60 seconds to warm up.
- Device button will remain orange and the message will read “LoFlo Warming Up”.



PHILIPS

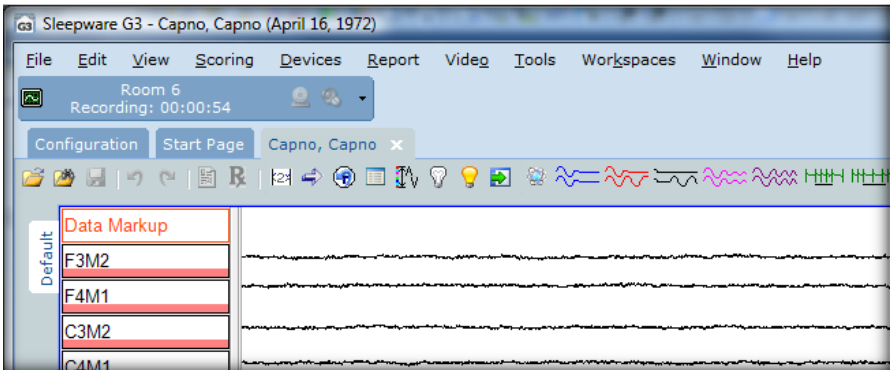
Zeroing

- After the LoFlo is warmed up, it is zeroed.
- This takes another 30-60 seconds.
- Device button will remain orange and the message will read "**LoFlo Zeroing**".



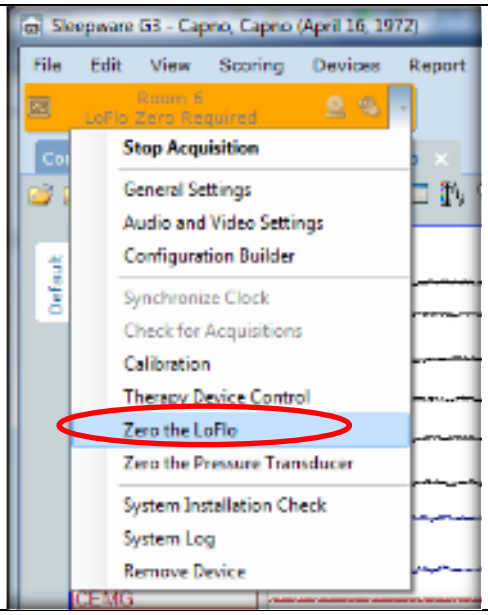
Normal

- *Once the LoFlo has been successfully zeroed, the device button will turn blue.*
- *Message will be standard "Running" with the duration shown.*
- ***At this time, the tubing between the LoFlo and the cannula should be connected.***

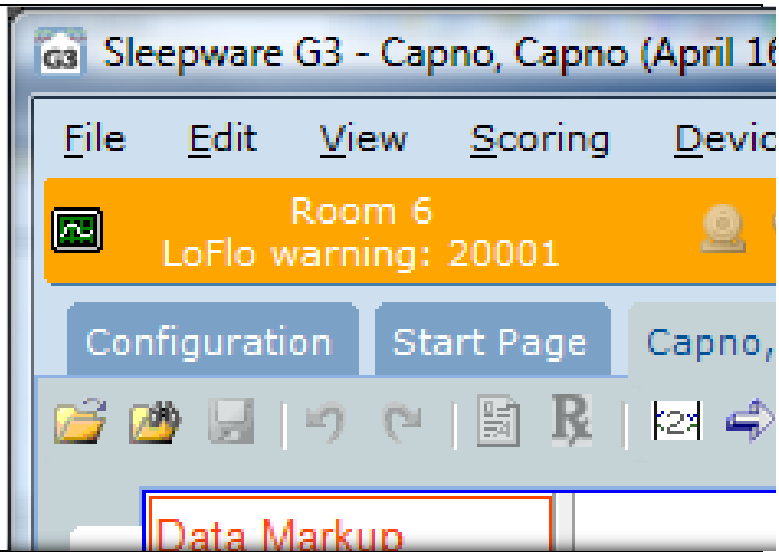


Warnings

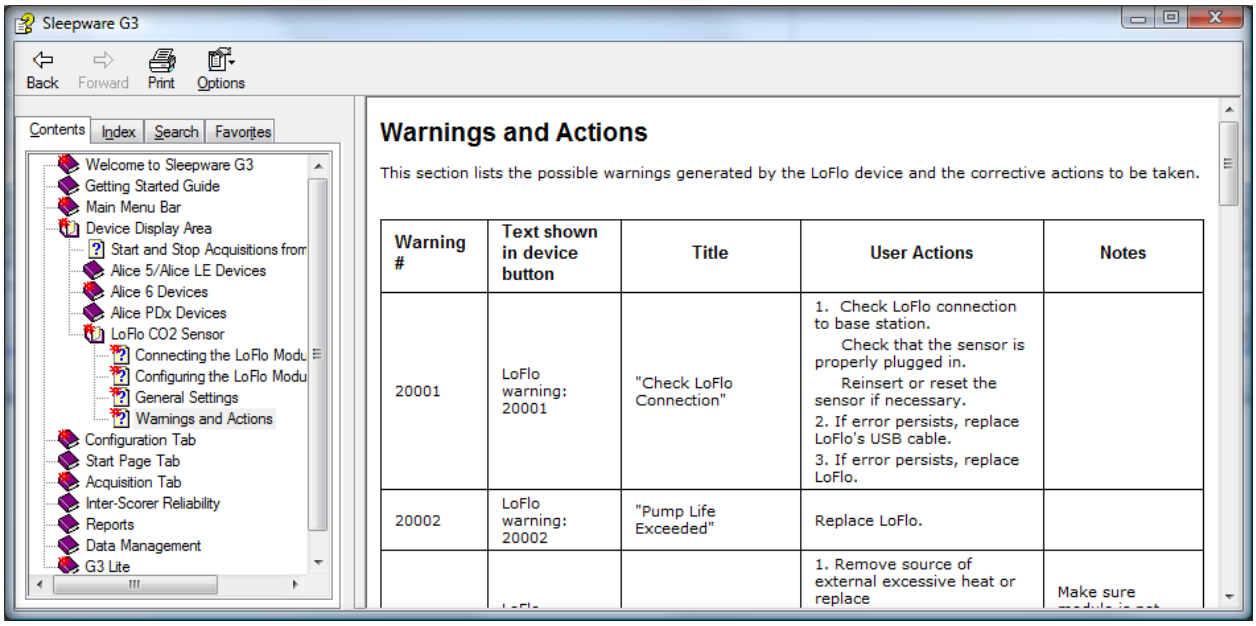
- Device button will turn orange.
- There are two possible "warning" states:
  - LoFlo Zero Required
    - Disconnect tubing between cannula and LoFlo
    - Manually zero the LoFlo from the Device menu



- Warning states
  - Numeric warning
    - Consult online help



ONLINE HELP



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
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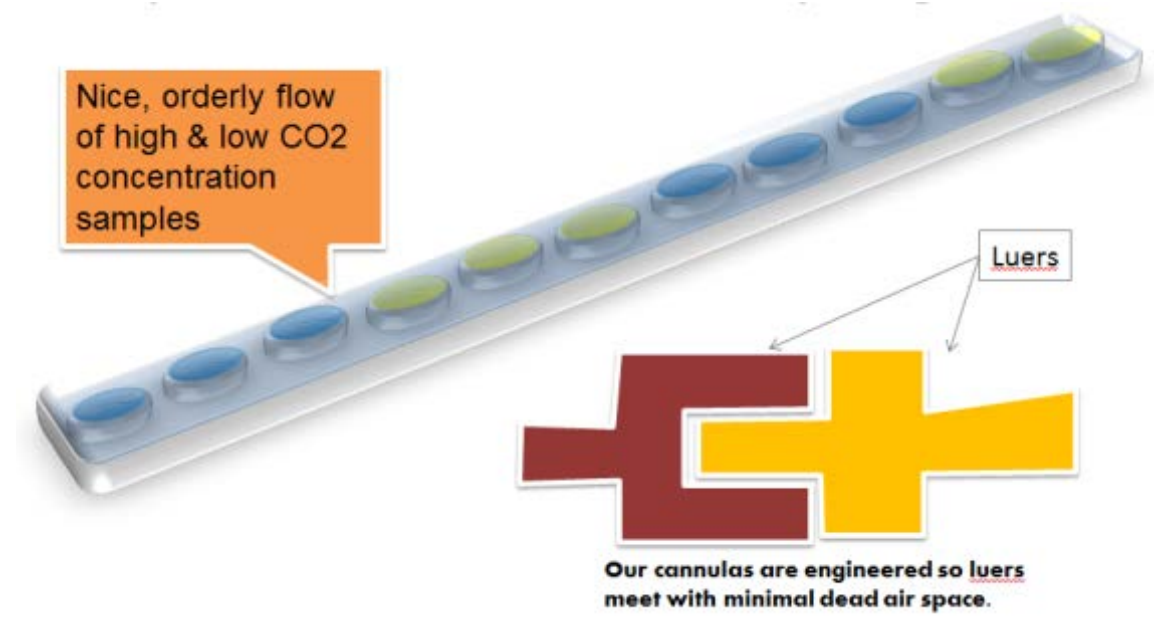
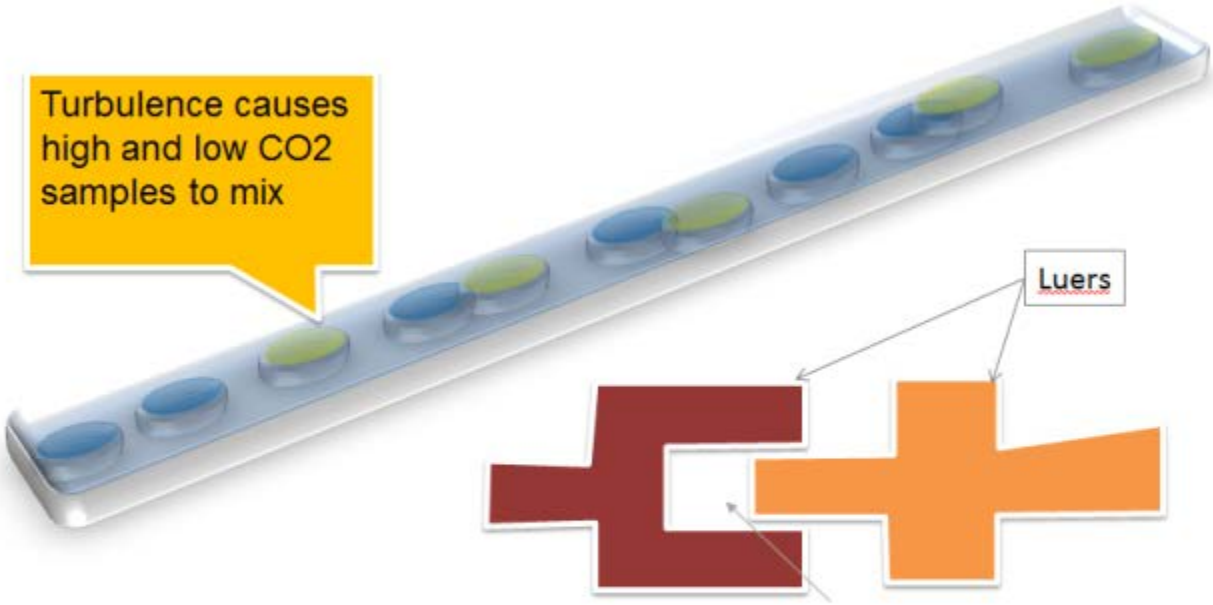
PHILIPS

SPECIAL LUER TO FIT SAMPLING LINE



Our cannulas are engineered so luers meet with minimal dead air space.



Luers on other cannulas can have too much dead air space, causing turbulence in sample stream. Wave forms are then rounded especially at higher respiratory rates.

PHILIPS

TIPS AND HINTS

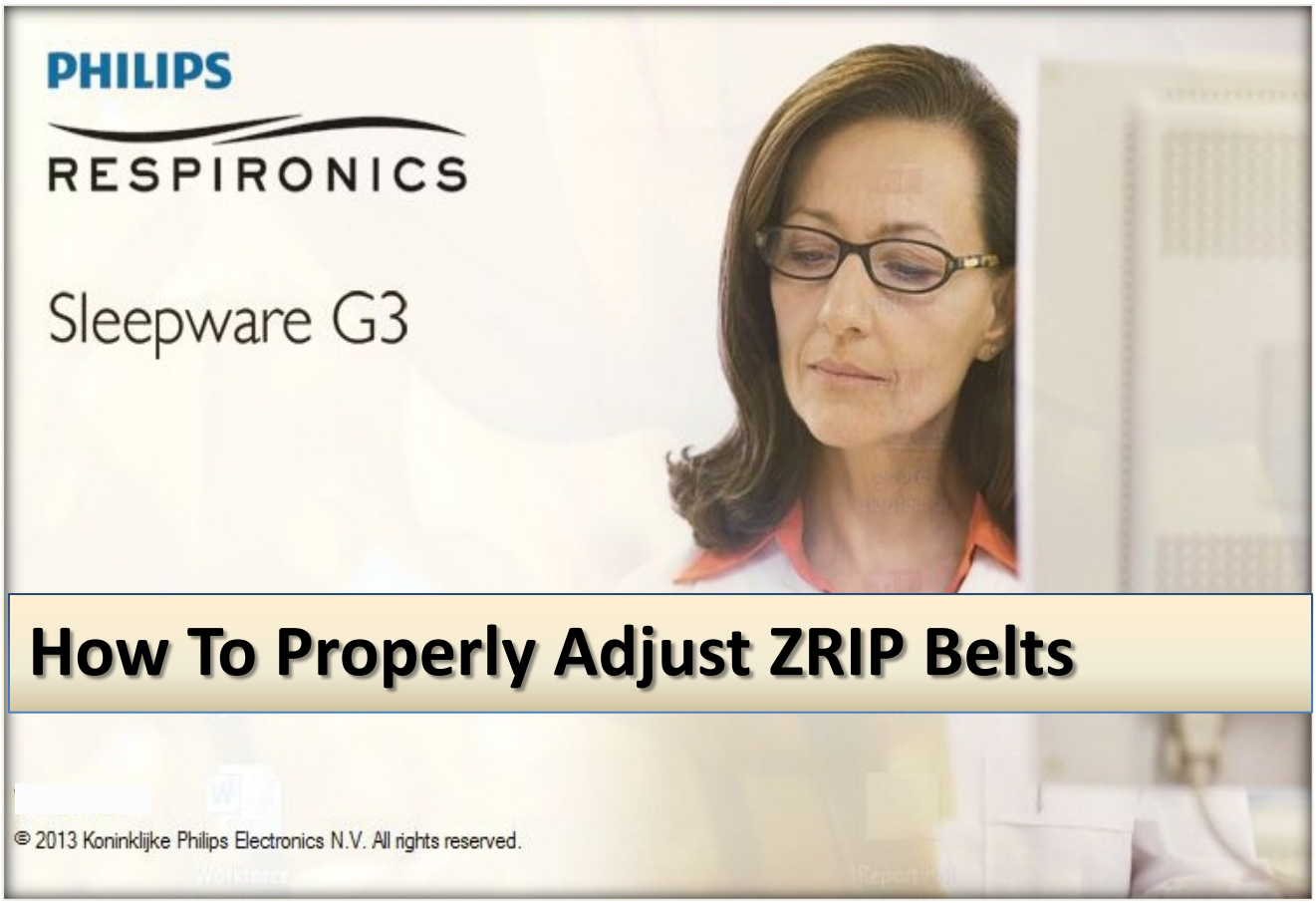
- Use LoFlo specific Pro-Flow cannulas
  - Matching of luers important for sharp wave forms
- LoFlo signals will be 3 to 5 seconds behind
  - Nature of side stream monitoring
    - Gas must travel from nose to device
- After updating a Base to R6, make sure to reboot

PHILIPS

PHILIPS

sense and simplicity

G3 Training Module



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
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How To Properly Adjust ZRIP Belts

ZRIP belts must be fitted correctly in order to generate an accurate amplified signal. Any adjustment to the belts must be done while the patient is upright, unlike the piezo belts, which can be adjusted while the patient is lying down. The ZRIP belts should be neither too loose nor too tight.

**** Tightening them too tightly is just as bad as having them too loose!*

The buckles should be 4-5 inches apart, when checking for fit. If the buckles are more or less than 4-5 inches, then the belts need to be adjusted.

Place the ZRIP belt lightly against the body to measure the fit - as you would before you click the belt buckles together.

* *DO NOT PULL THE BELTS TIGHTLY WHEN CHECKING FIT.*

The buckles should be 4-5 inches apart, when checking for fit. If the buckles are more or less than 4-5 inches, then the belts need to be adjusted.

TO INCREASE THE BELT SIZE:

Grasp the belt buckle in one hand.

With your other hand, grab the bottom belt loop, and pull it away from the belt buckle.

PHILIPS

Once you've pulled the belt as far as needed, rest your thumb on the top belt (note left thumb holding buckle and belt) so it doesn't move.

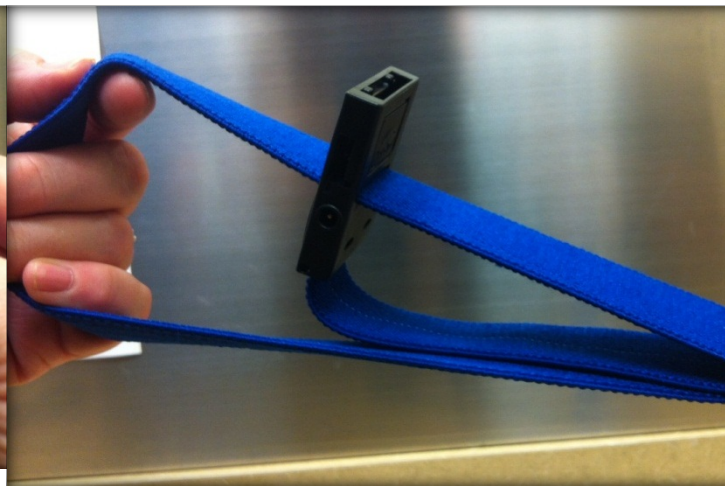
Grasp the main belt on an area PAST the slide lock, and pull away from the buckle. This will lengthen the main belt. You can adjust the belt equally from both sides or from one side.

PHILIPS

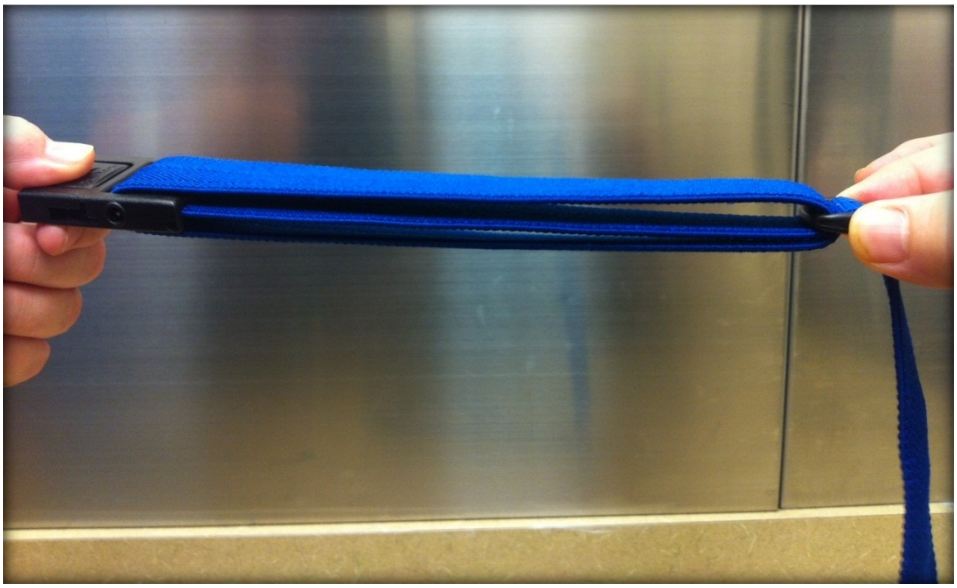
TO REDUCE THE BELT SIZE:

Part One

Part Two



Next, grab the belt buckle in one hand, and the slide lock in the other, then pull them apart. This will draw up the main belt and make it smaller.



According to the ZRIP instruction manual (REF 1073858), “The chest belt should be across the lower third of the breast bone.”

The abdominal belt should be positioned over the navel, or as close to it as possible.

Consult ZRIP instructions for use for more information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

Sleepware G3 with Somnolyzer

Training Module

Report feature:
Electronic Signature
Finalizing Reports

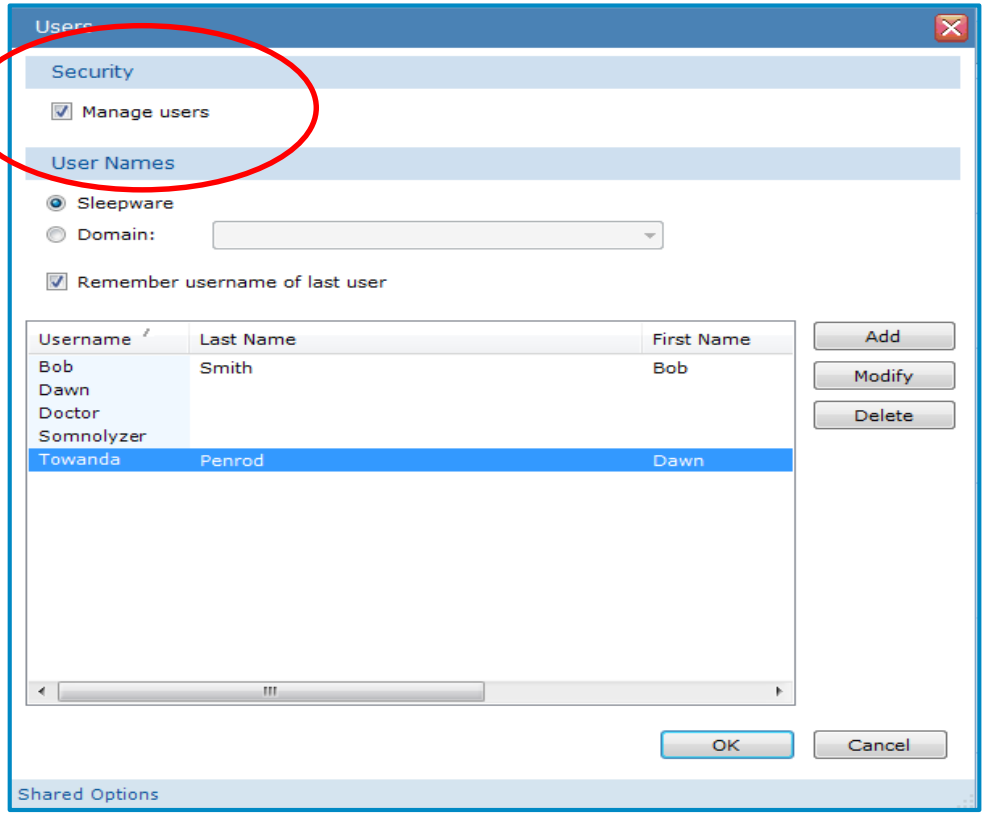
innovation you

PHILIPS

Objectives

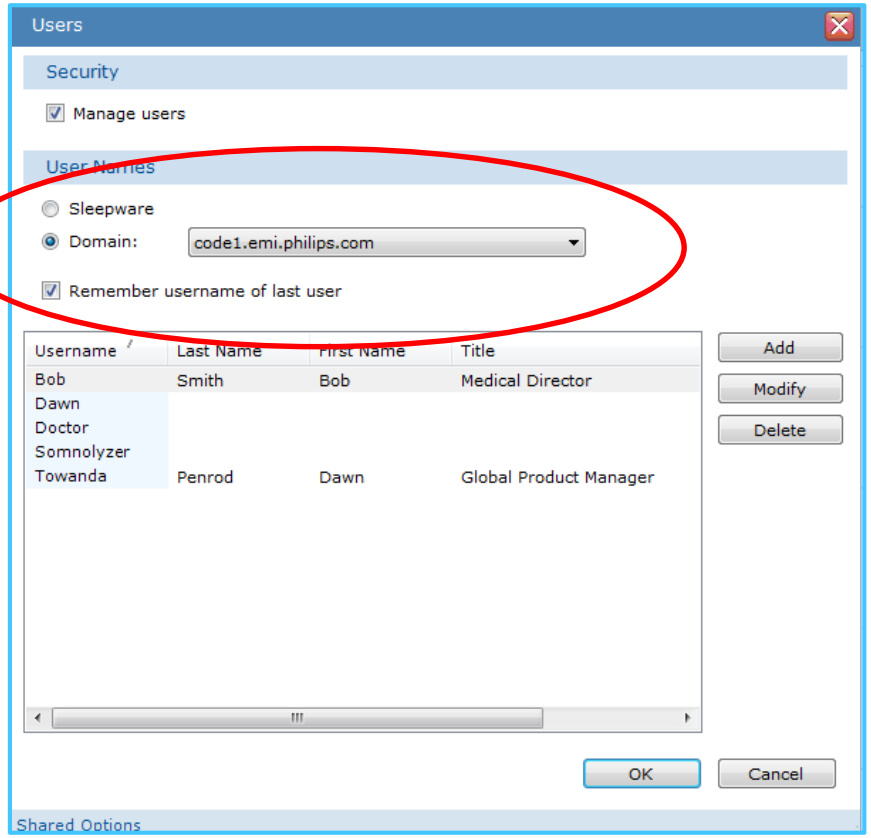
- Set up or edit user profiles for Electronic Signature use.
- How to add the Electronic Signature report code to a report template.
- Add multiple signatures to a report.
- The rules for using Electronic Signatures.
- Finalize a report.
- Finalization options.

Setting up a user profile for electronic signature



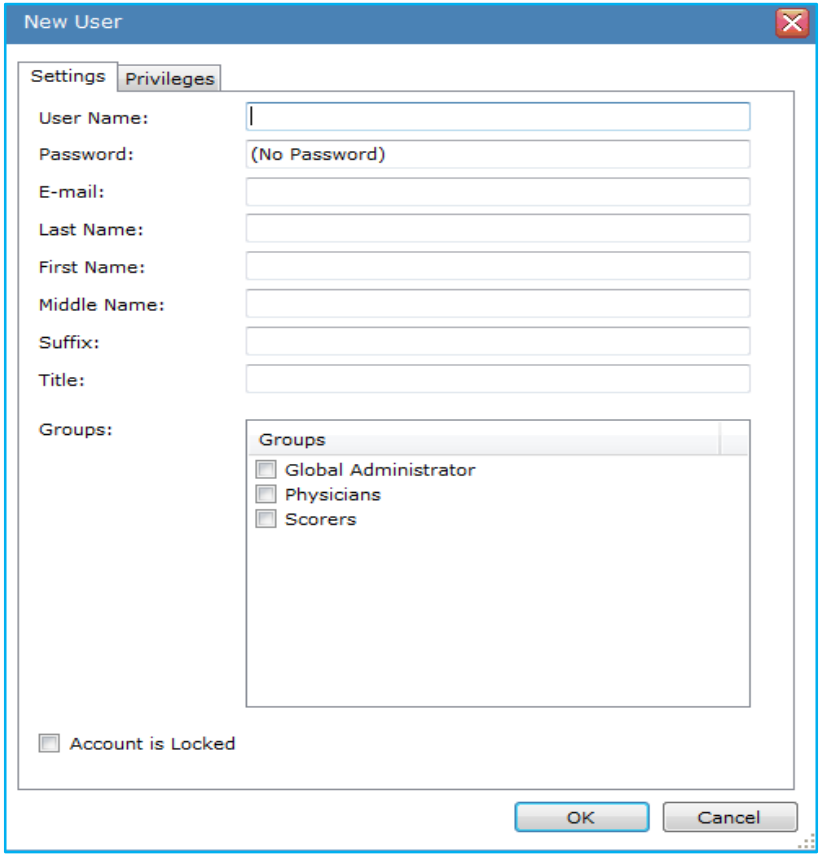
To use electronic signatures, you must be utilizing the 'manage users' feature in Sleepware G3.
In the User Names area, select either the Sleepware or Domain option. If Sleepware is selected, users will have a username and password (password is optional) when logging into Sleepware G3 and when using Electronic Signature.

Domain users



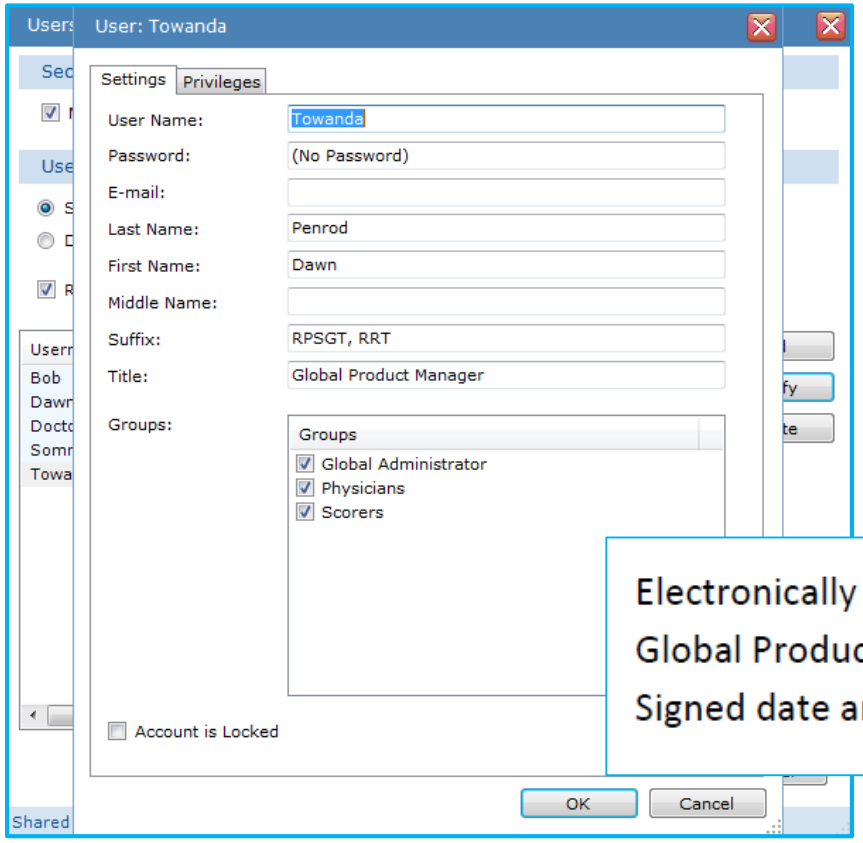
If Domain is selected, users will use their Windows username and password for electronic signature. If the **Domain** option is selected, when users are added to Sleepware G3, a list of domain names is presented. Any domain name can be added as a Sleepware user. With this option, a separate Sleepware login is not required when launching Sleepware and this login and signature will be used to electronically sign the reports.

Adding a new Sleepware user profile



When the Sleepware option is selected to manage users, a Sleepware user name must be added. The password is optional, even for electronic signature. A user's **First** and **Last Name** are the only required fields for the user to electronically sign reports. **Suffix** (**Post-nominal letters or credentials)** and **Title** are not required; however, if added to the user profile, they will be added to the electronic signature.

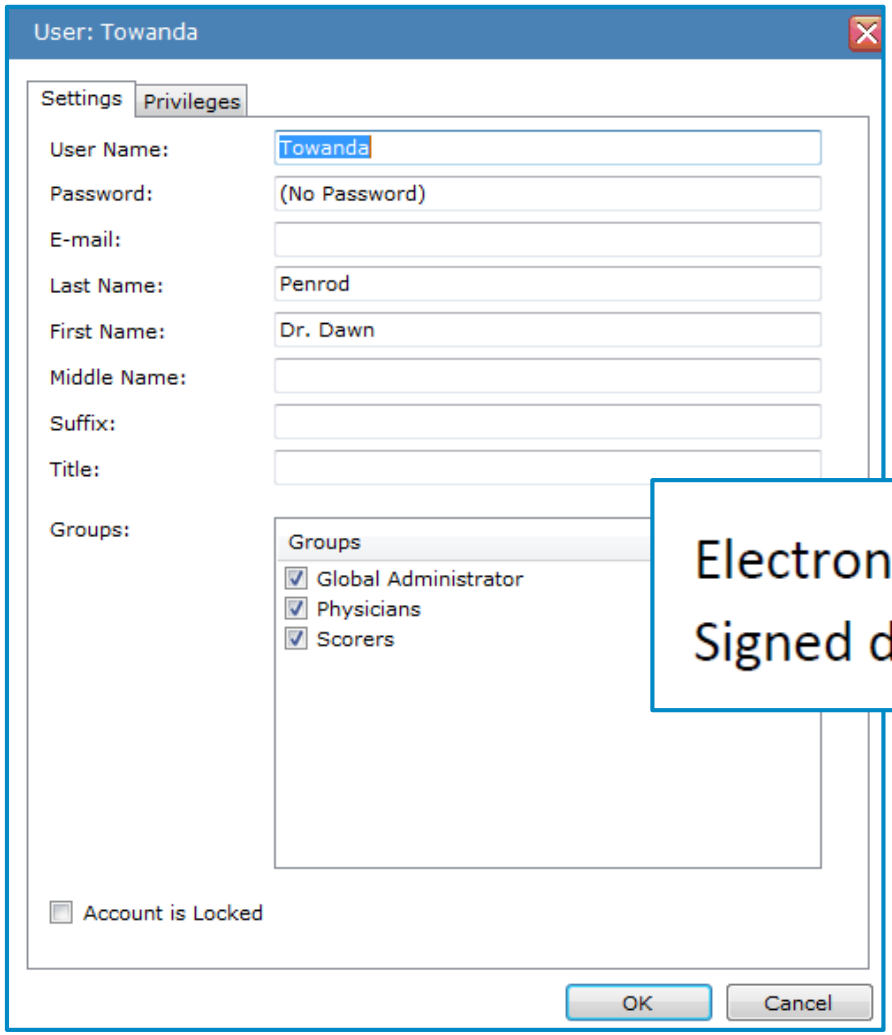
Example of a user's electronic signature using first name, last name, title and suffix. The date and times are stamped automatically and based on computer time.



Suffix
(Post-nominal letters or credentials)

Electronically signed by: Dawn Penrod, RPSGT, RRT
Global Product Manager (Title)
Signed date and time: 8/26/2016 11:09 AM

Example of a user's electronic signature using first name and last name only. The prefix or honorific "Dr." was added to the First Name field so that this would display with the user name on the report

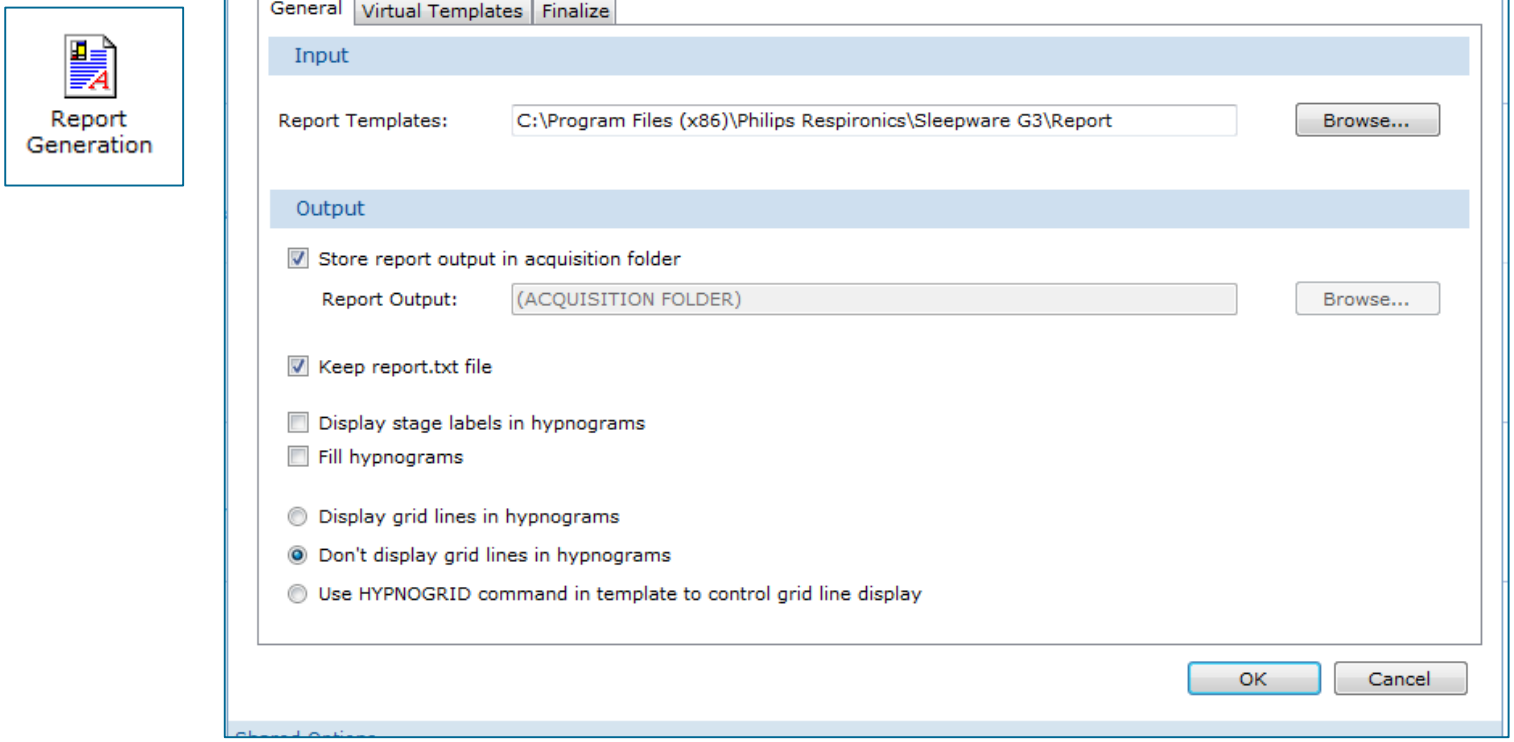


Electronically signed by: Dr. Dawn Penrod

Signed date and time: 9/14/2016 3:45 PM

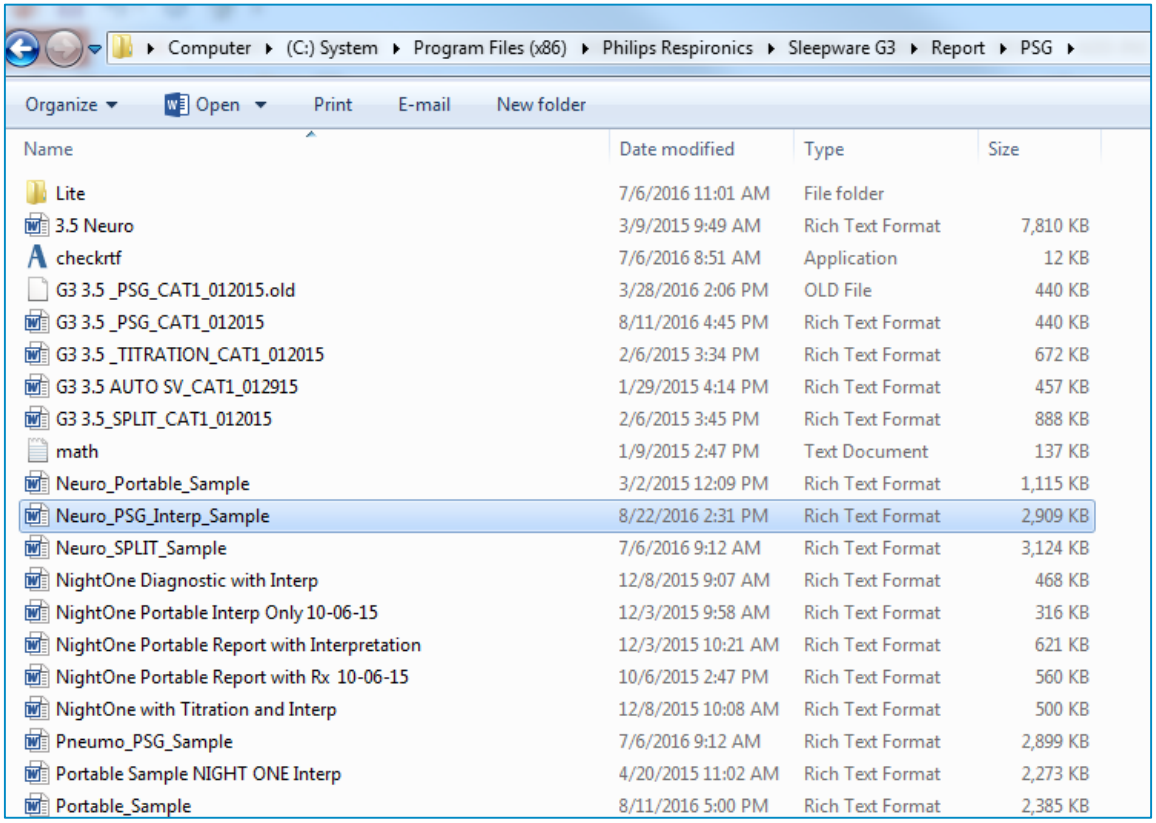
The $ESignature$ command must be added to the template on which a report is based *before* the report is generated. The command can be placed anywhere in the template, but it is recommended that it be placed near the bottom or end of the report.

Finding your report templates: Open Sleepware G3 > Configuration Page > Report Generation > Report Templates



You will see your report templates location listed under the Input section. In this example the path is C:\Program Files (x86)\Philips Respironics\Sleepware G3\Report. You can copy and paste this location to Windows Explorer to quickly find it or you can browse to this location starting with the windows Starter icon. Once the report folder is found, you will select the report type folder, for example PSG or MSLT.

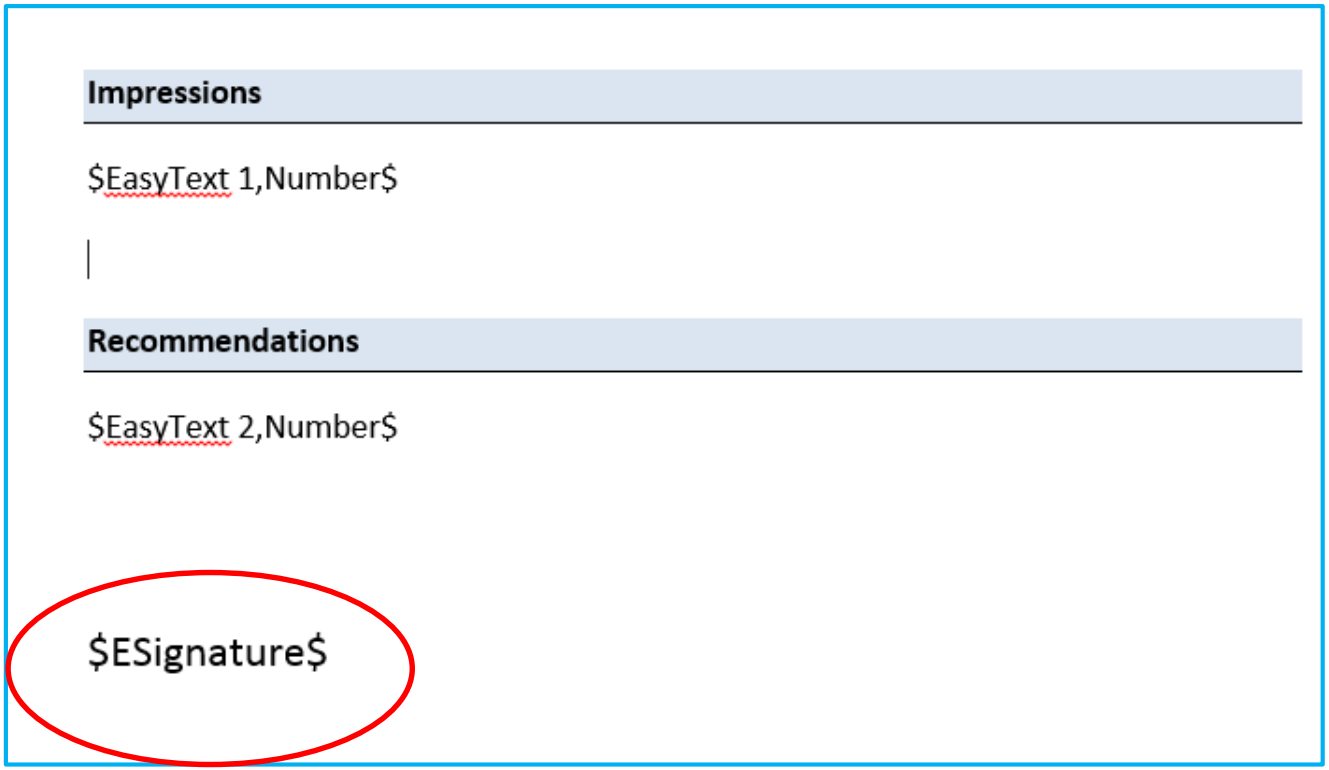
C:\Program Files (x86)\Philips Respironics\Sleepware G3\Report\PSG



Browse to the report in which you'd like to add the electronic signature report command. Double left click on that report to open it. In this example we will use the Neuro_PSG_Interp_Sample report.

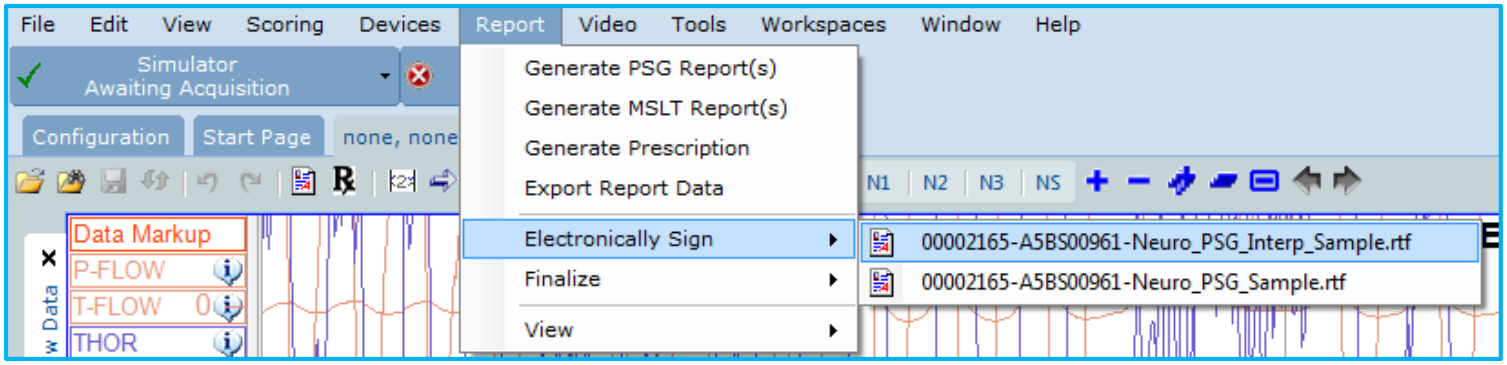
Adding the $ESignature$

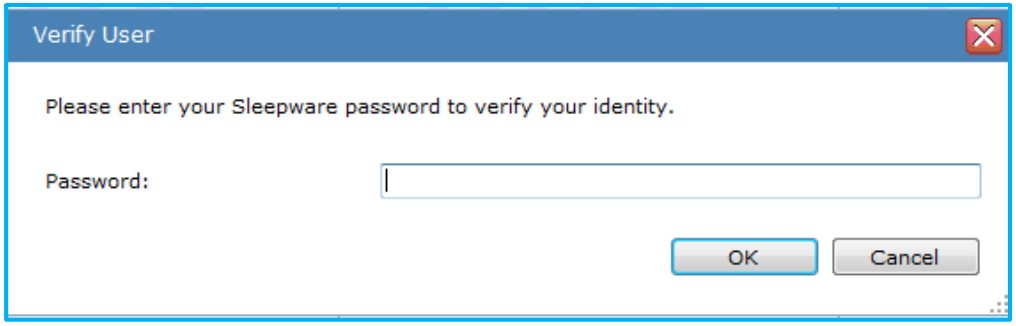
The command can be placed anywhere in the template, but it is recommended that it be placed near the bottom or end of the report.



Even if multiple electronic signatures will be added to the report, it is necessary to add the code only once to the template.

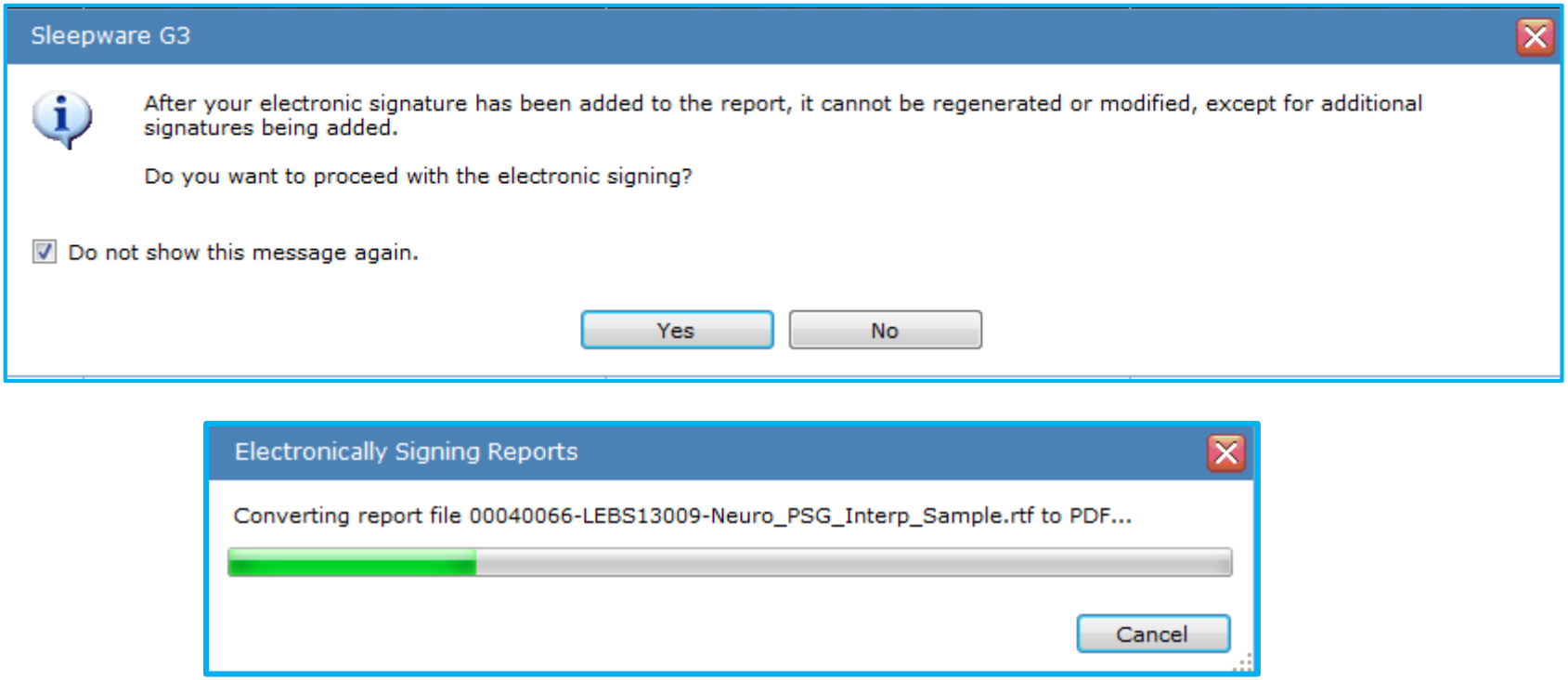
To electronically sign a report:
Open a patient record and select Report > Electronically Sign





When signing the report, select the report in which you want to include an electronic signature. Since there are two reports to choose from, we know that two reports have been previously generated. Select the report Neuro PSG Interp Sample in which the Esignature report code has been added to the template. Once selected, you will be prompted to enter your password. Once entered, or if you do not have a password, select OK.

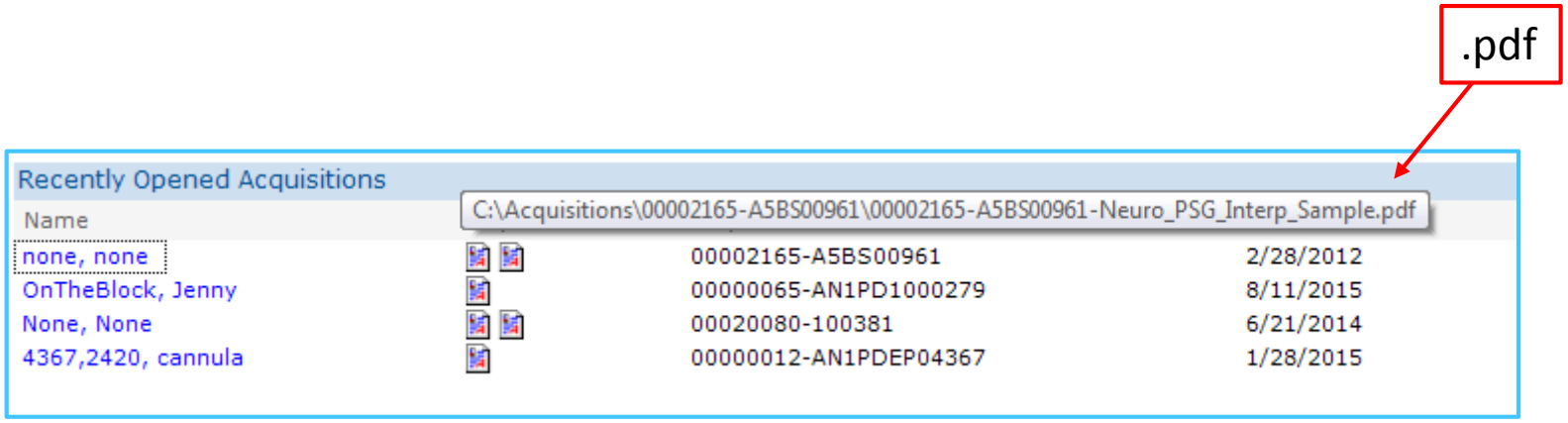
Electronic Signature pop-up messages and status bar



When electronic signature is executed for the first time, the message shown above is displayed. For the **Do you want to proceed with the electronic signing?** prompt, you can select Yes to proceed or No to stop the process if you think more changes will be made to the report.

If you prefer that this message not be displayed again, select the **Do not show this message again** option, then select Yes. A status bar is then displayed showing the progress of the report's generation and conversion of the report file from an RTF format to a PDF format.

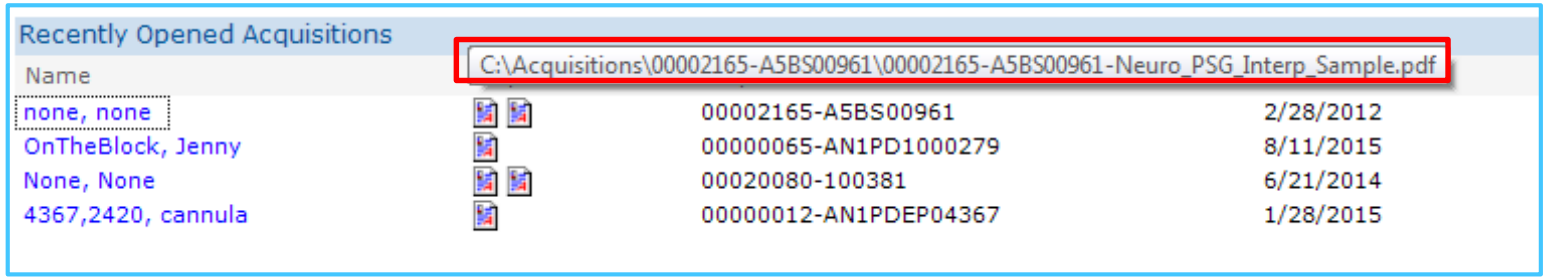
The converted report

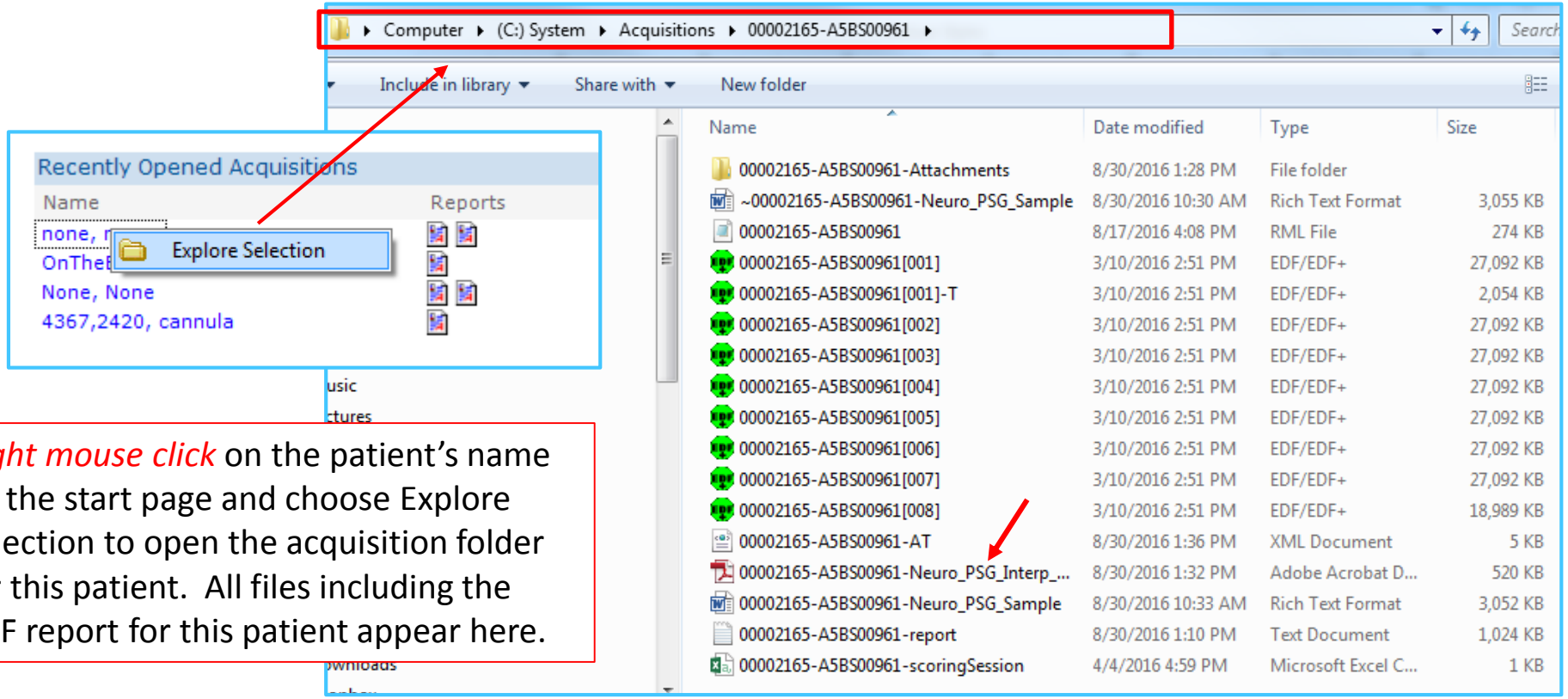


The .rtf report file that was converted upon signing will automatically deleted from the patient's acquisition folder. Only the .pdf file will remain.
The .pdf report file will also be visible and accessible from the Start Page.

report locations; easy access to reports

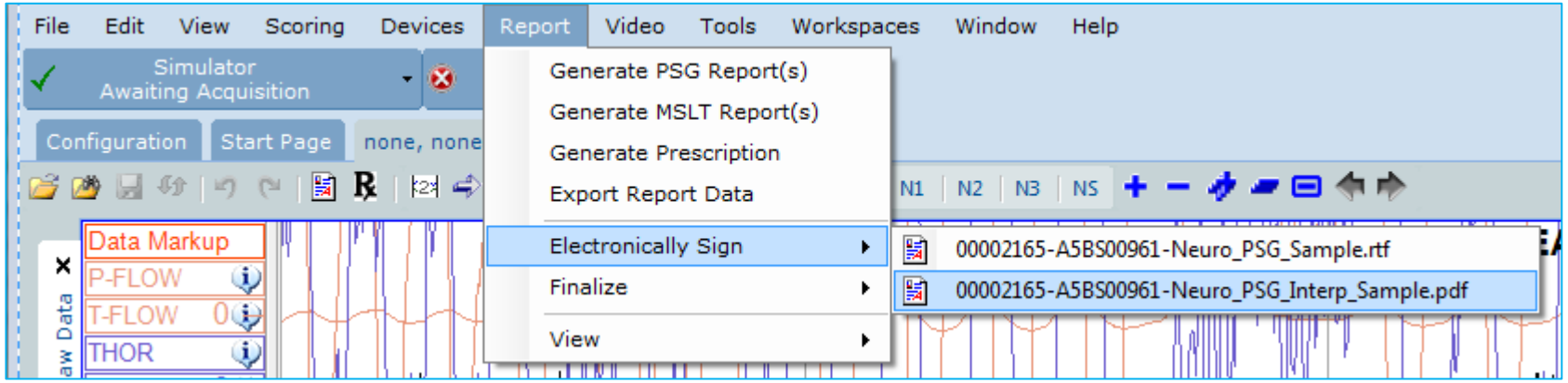
Hover the mouse pointer over the reports on the start page to view their location, name and file type





Right mouse click on the patient's name on the start page and choose Explore Selection to open the acquisition folder for this patient. All files including the PDF report for this patient appear here.

Adding a second electronic signature



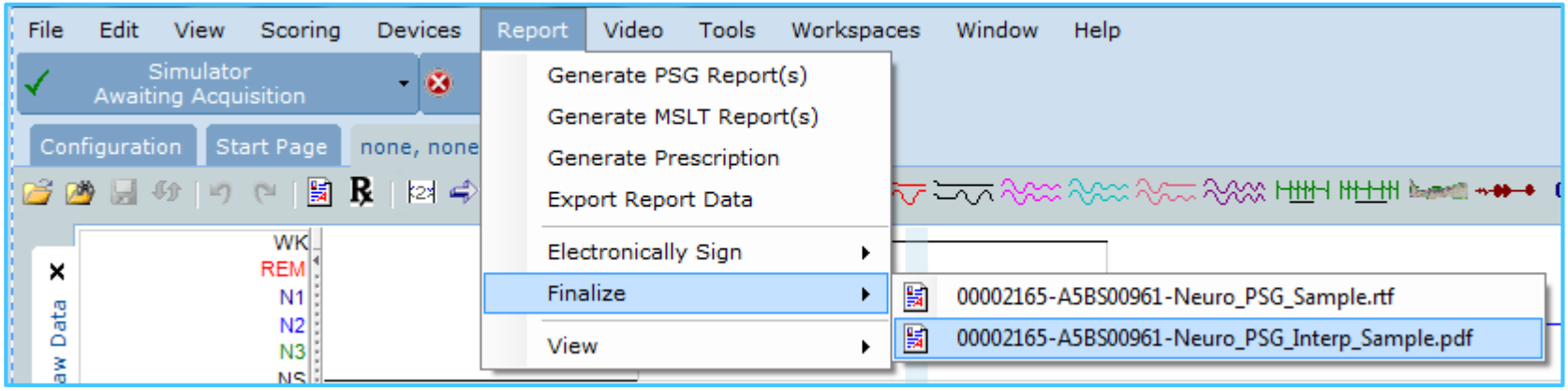
Electronically signed by: Dawn Penrod, RPSGT, RRT
Global Product Manager
Signed date and time: 8/30/2016 1:12 PM

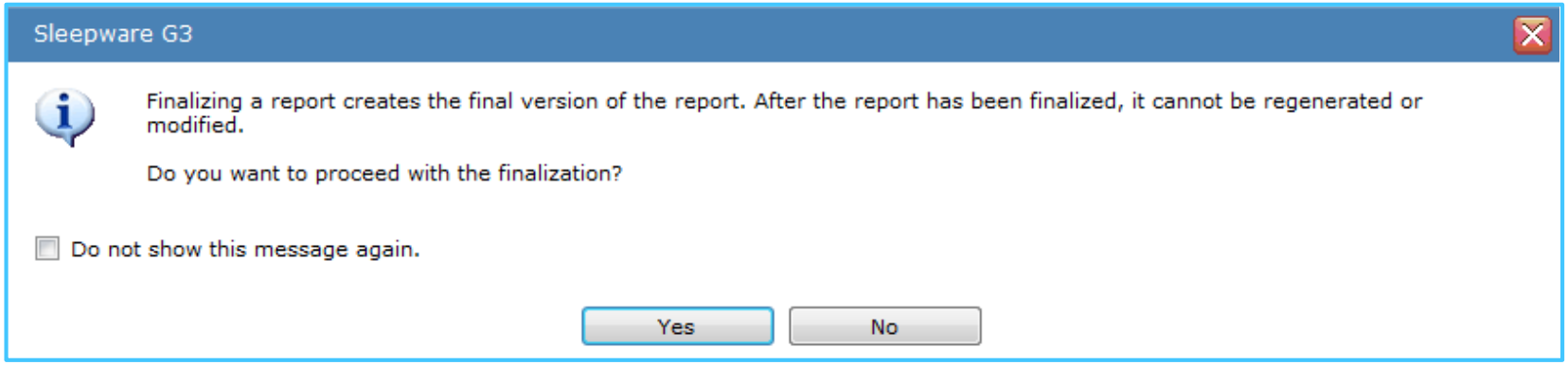
Electronically signed by: Bob Smith, MD
Medical Director
Signed date and time: 8/30/2016 1:32 PM

A second user logs into G3 using her own username to execute electronic signature. This second signature can be added to the PDF file. An unlimited number of additional signatures can also be added to this PDF file. However, after finalization of the report, no additional signatures can be added. We will review finalization in upcoming slides.

Finalizing the report

With the patient record open, select, Report > Finalize



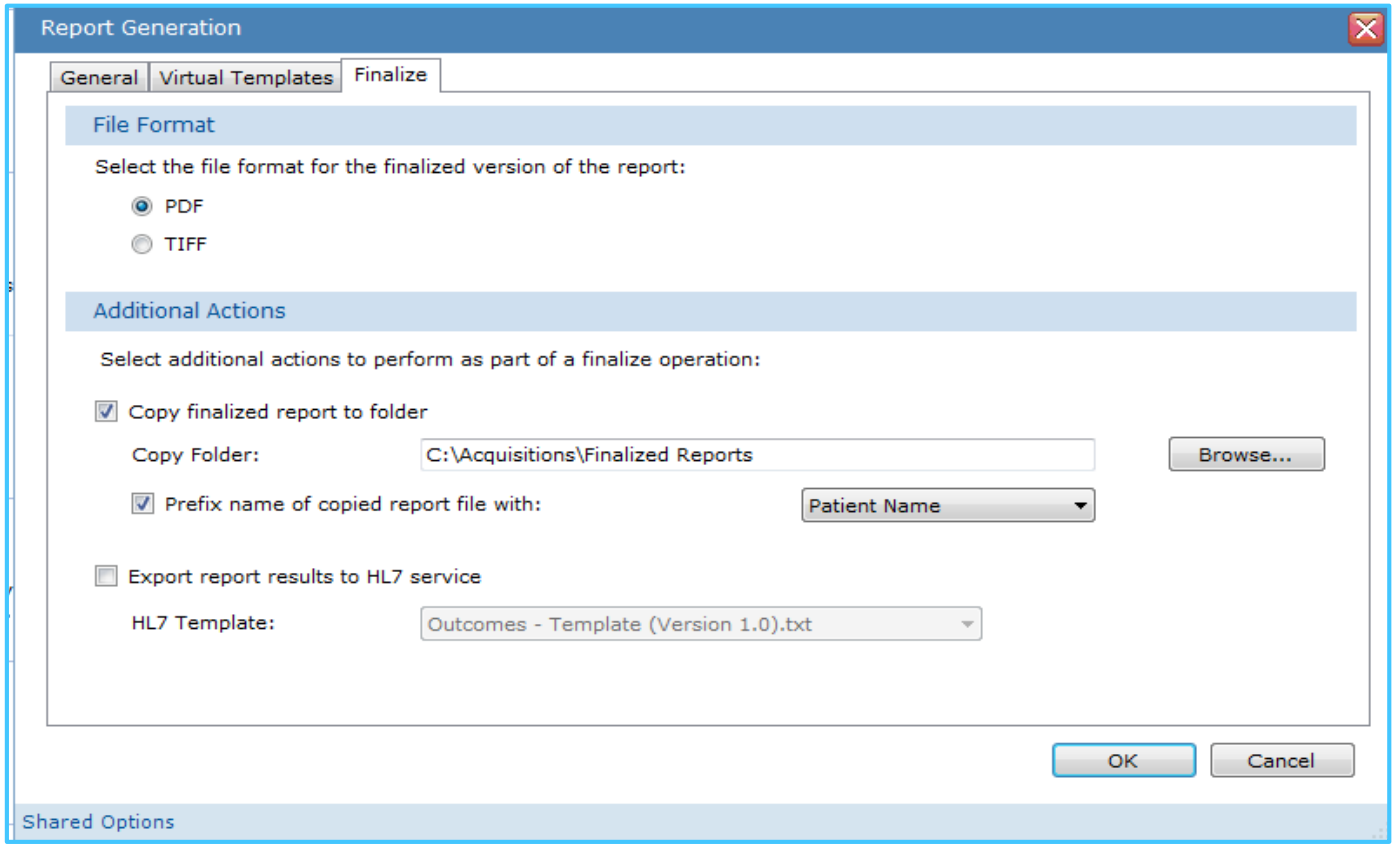


Once a report is finalized, it cannot be regenerated or modified. If you find a report needs modified after finalization, you must first delete the finalized copy and step through the report Generation process from the beginning.

Note: It is possible to finalize a report that has not gone through electronic signature.

Finalize Actions:

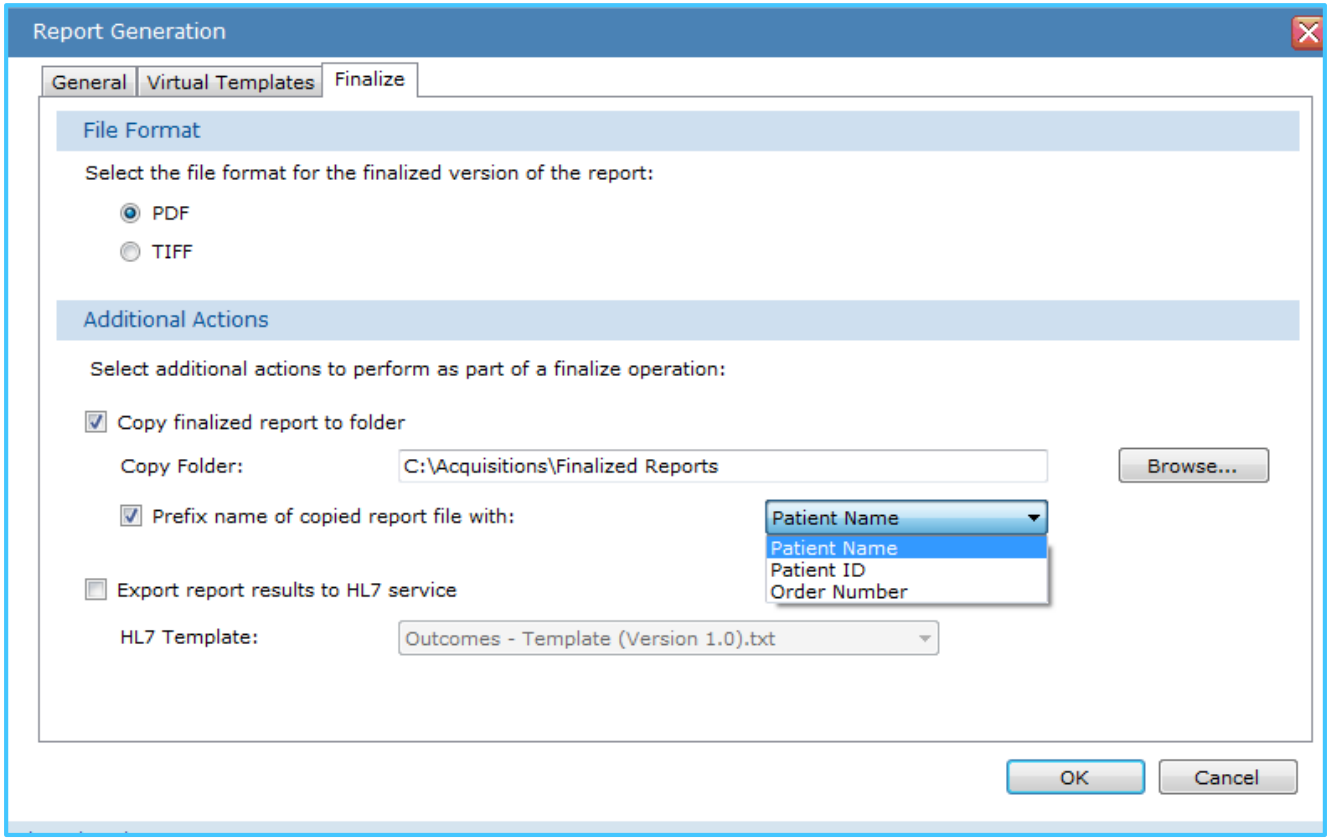
Configuration Page > Report Generation > Finalize



The **Finalize** tab lists the actions taken by Sleepware G3 every time a report is finalized.
The first option, File Format, allows you to select either **PDF** or **TIFF** for the finalized report.
The default is PDF.

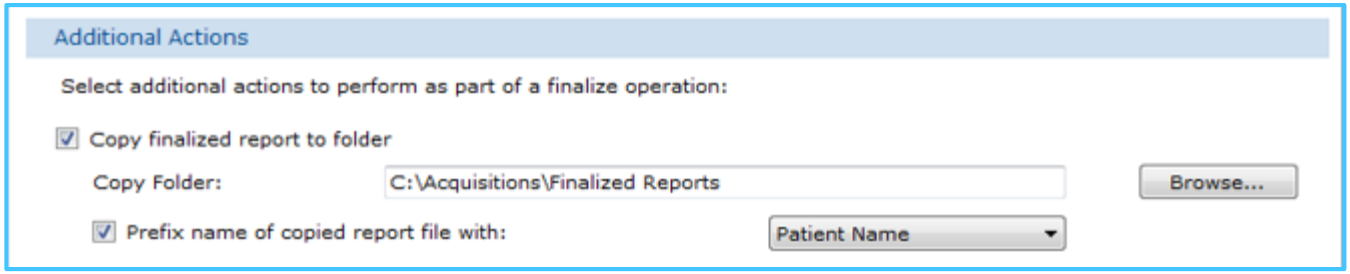
Additional Finalize Actions:

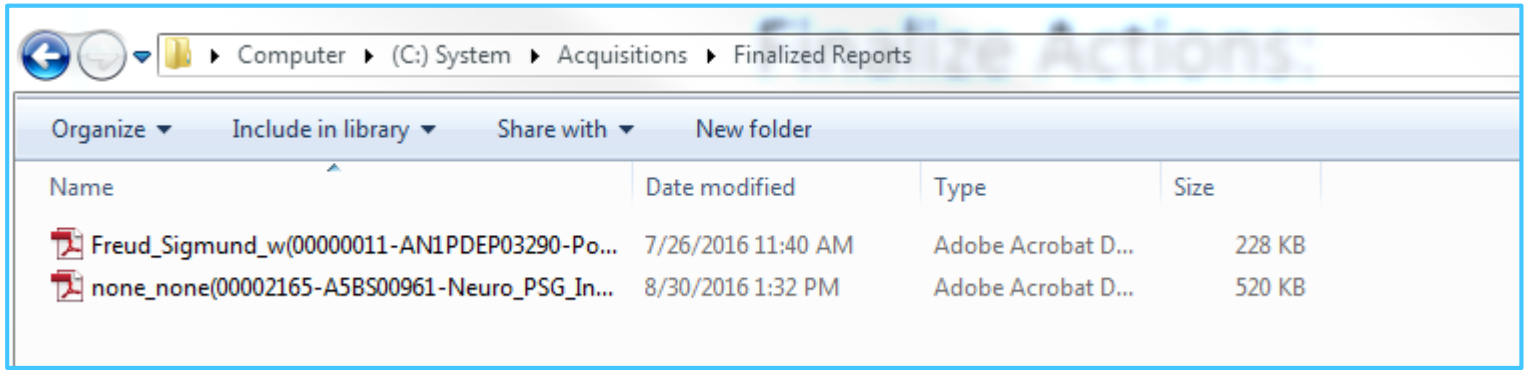
Configuration Page > Report Generation > Finalize



(Optional) You can select **Copy finalized report to folder**, then select a folder on the computer to house the report. You can also select the **Prefix name of copied report file with** option and select a prefix from the drop-down list: Patient Name, Patient ID or Order Number.
(Optional) You can select the **Export report results to HL7 service** option and select an HL7 report template from the drop-down list.

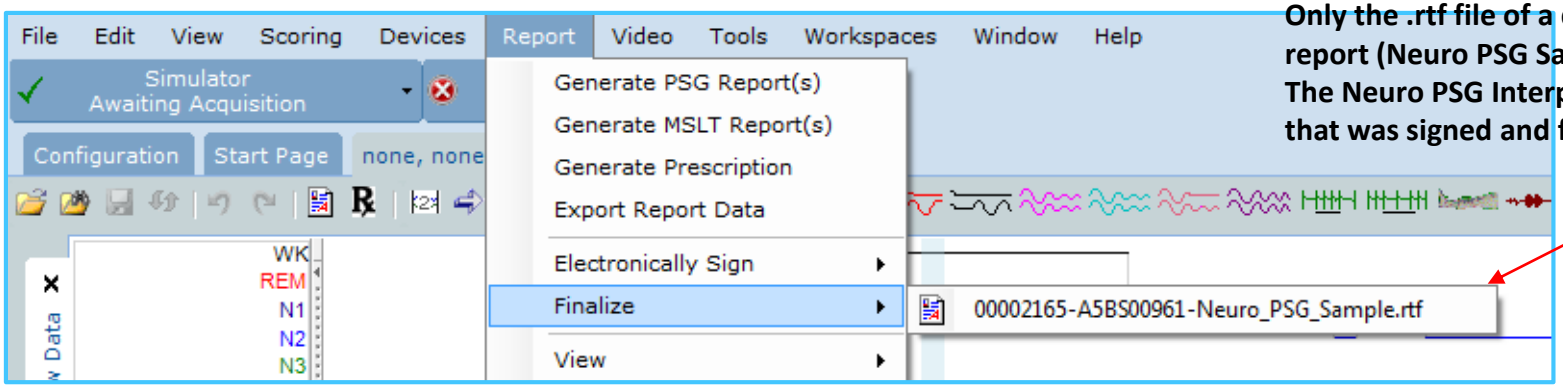
Finalized report locations





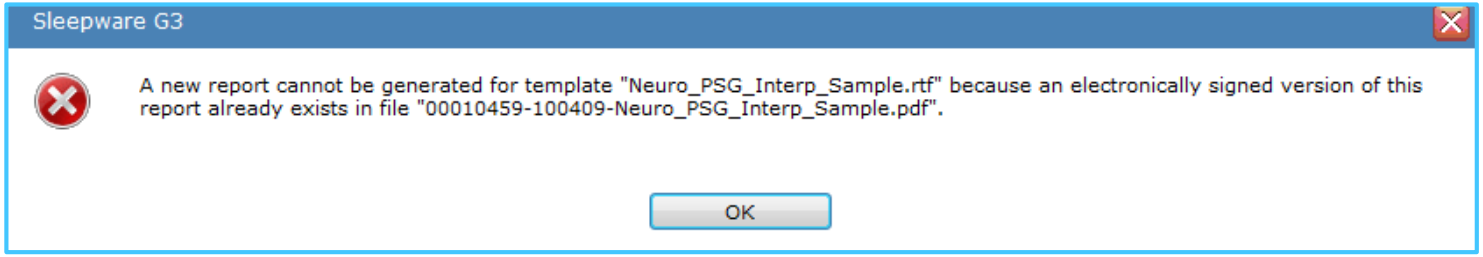
A location for finalized reports is usually specified when a customer is using the HL7 service. HL7 can be configured to this folder location to retrieve reports. A location for finalized reports can also be utilized by customers who wish to keep finalized reports in a central location for easy access. The feature that allows a report prefix to be assigned as patient name, patient ID or Order ID can help simplify the naming process for easy identification.

After finalization



Once a report is finalized, it is no longer visible when accessing the Electronically Sign or Finalize menu.

The report that was electronically signed or finalized cannot be regenerated.



If it is necessary to recreate this report you must first delete it from the acquisition folder. A report that has been converted to PDF or TIFF through either electronic signature or finalization cannot be regenerated until the original is deleted.

Thank you

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

1131618 R00
RPM 09/15/2016

Sleepware G3 with Somnolyzer

Training Module

Report feature:
Pie, Bar and Column Charts

innovation you

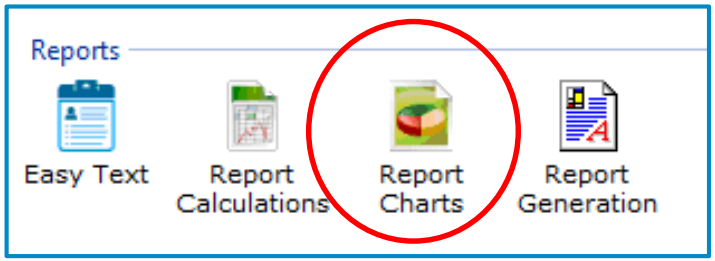
PHILIPS

Objectives

- Review pie, bar, and column chart settings in Sleepware G3.
- Adding report codes for charts you wish to use in your report templates.
- Finding the report codes for pie, bar and column charts in Sleepware G3‘s online help.
- Understanding the chart report code commands and sizing options.
- Selecting & generating a report that contains pie bar and column charts.

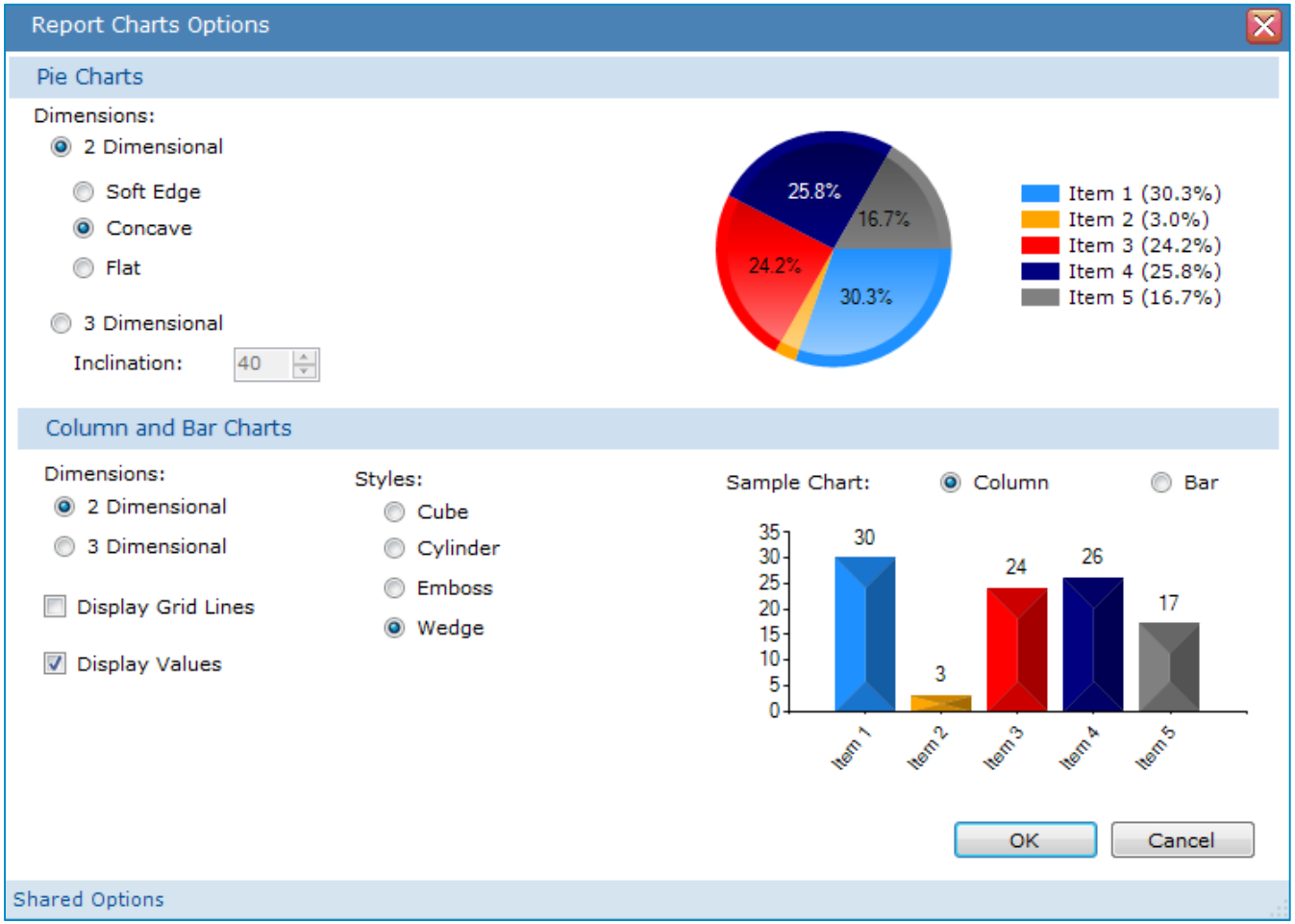
Sleepware G3 with Somnolyzer

Configuration page settings for Report Charts

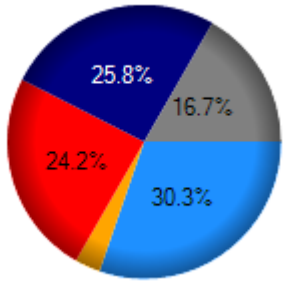


Report Charts Icon

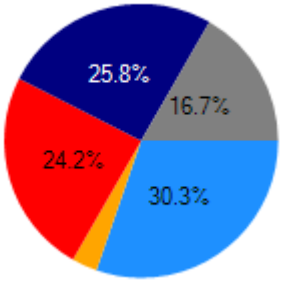
Report chart options



Soft Edge

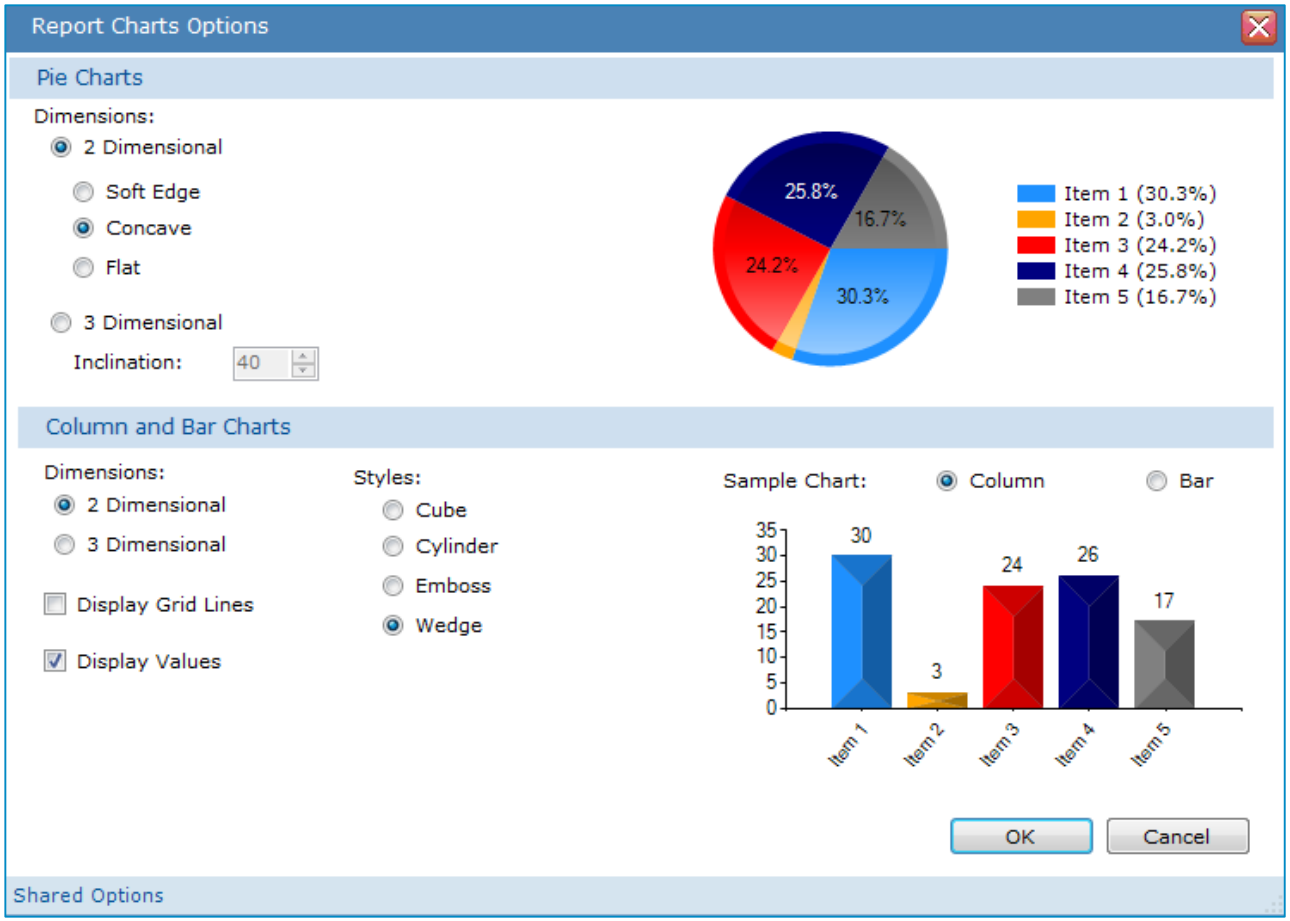


Flat

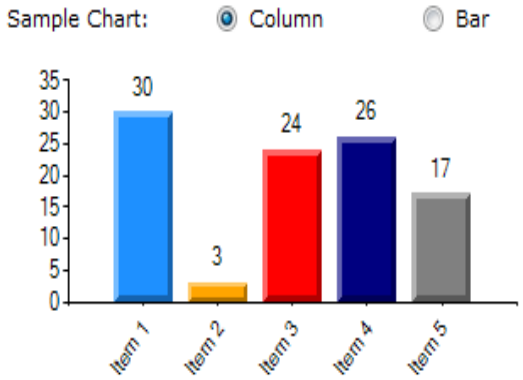


Currently **2 Dimensional** is selected for pie, bar and column charts

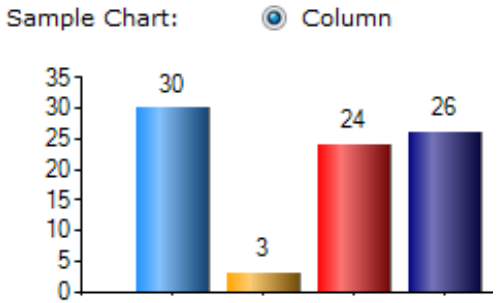
Report chart options



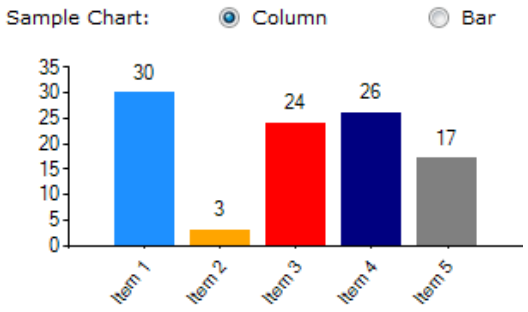
Emboss



Cylinder

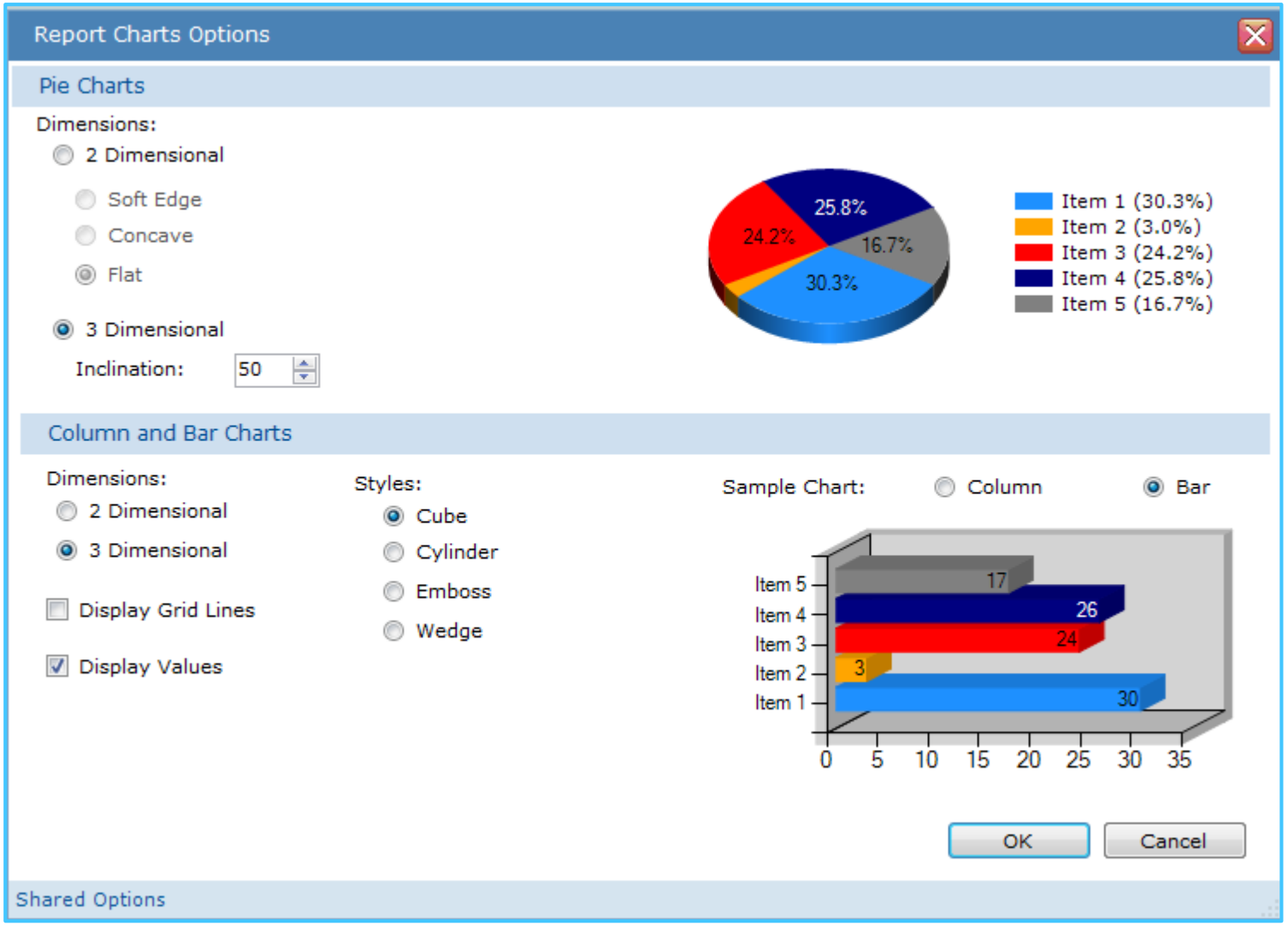


Cube

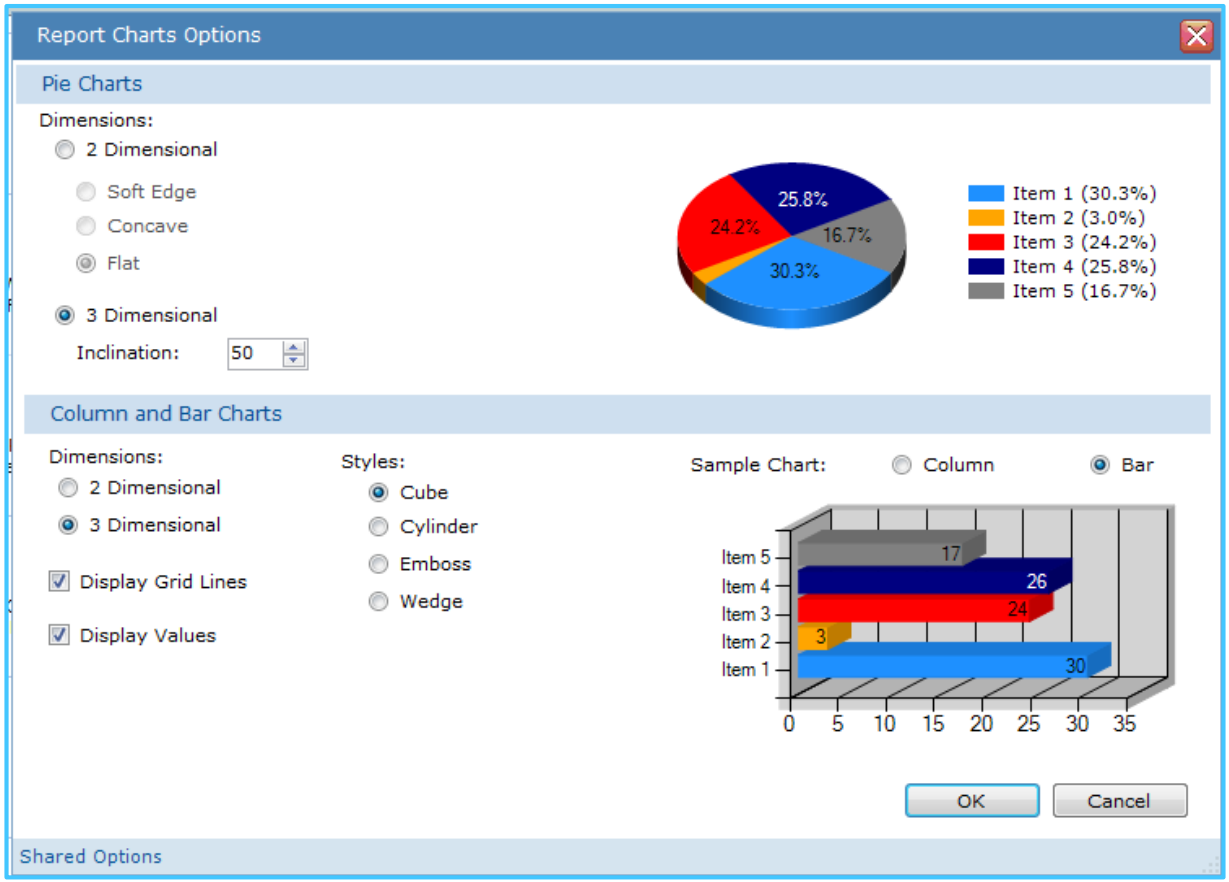


Currently **2 Dimensional** is selected for pie, bar and column charts

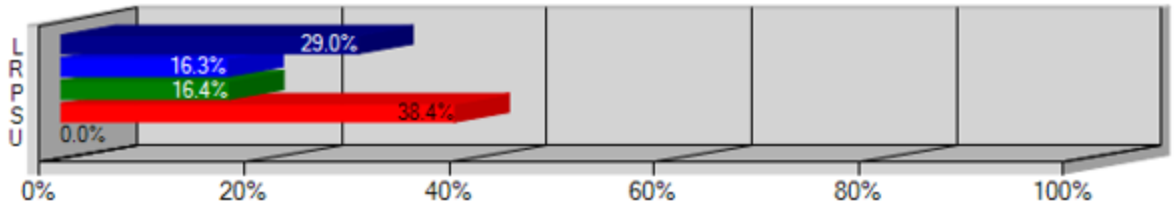
3 Dimensional options



Display values and grid lines for the column & bar charts



i.e. Body Position % displayed as **3 Dimensional** bar chart, cube style



Report commands

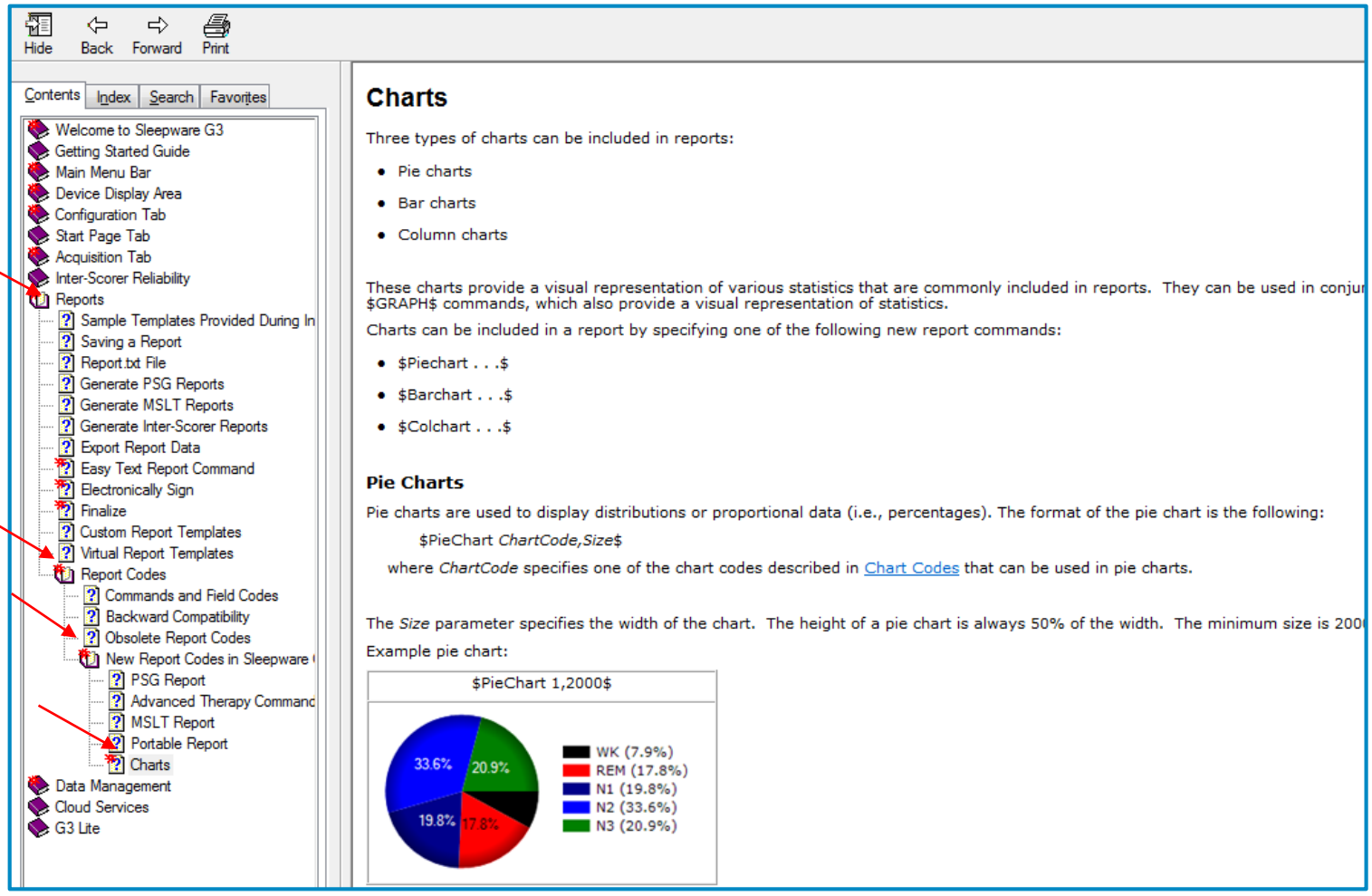
Charts can be included in a report by specifying one of these new report commands:

$Piechart . . .$

$Barchart . . .$

$Colchart . . .$

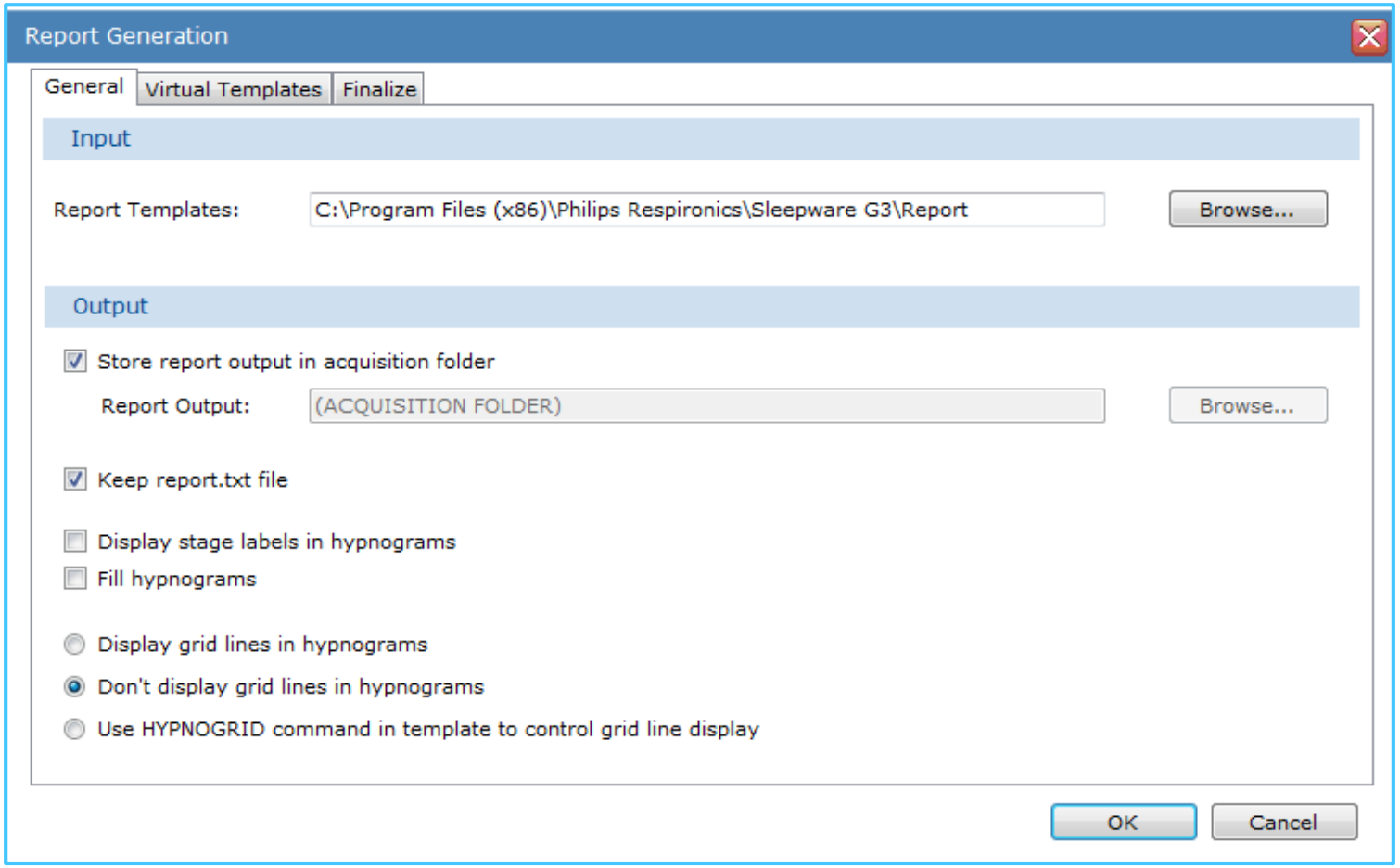
Finding report codes in the online help



Reports > Report Codes > New Report codes in Sleepware > Charts

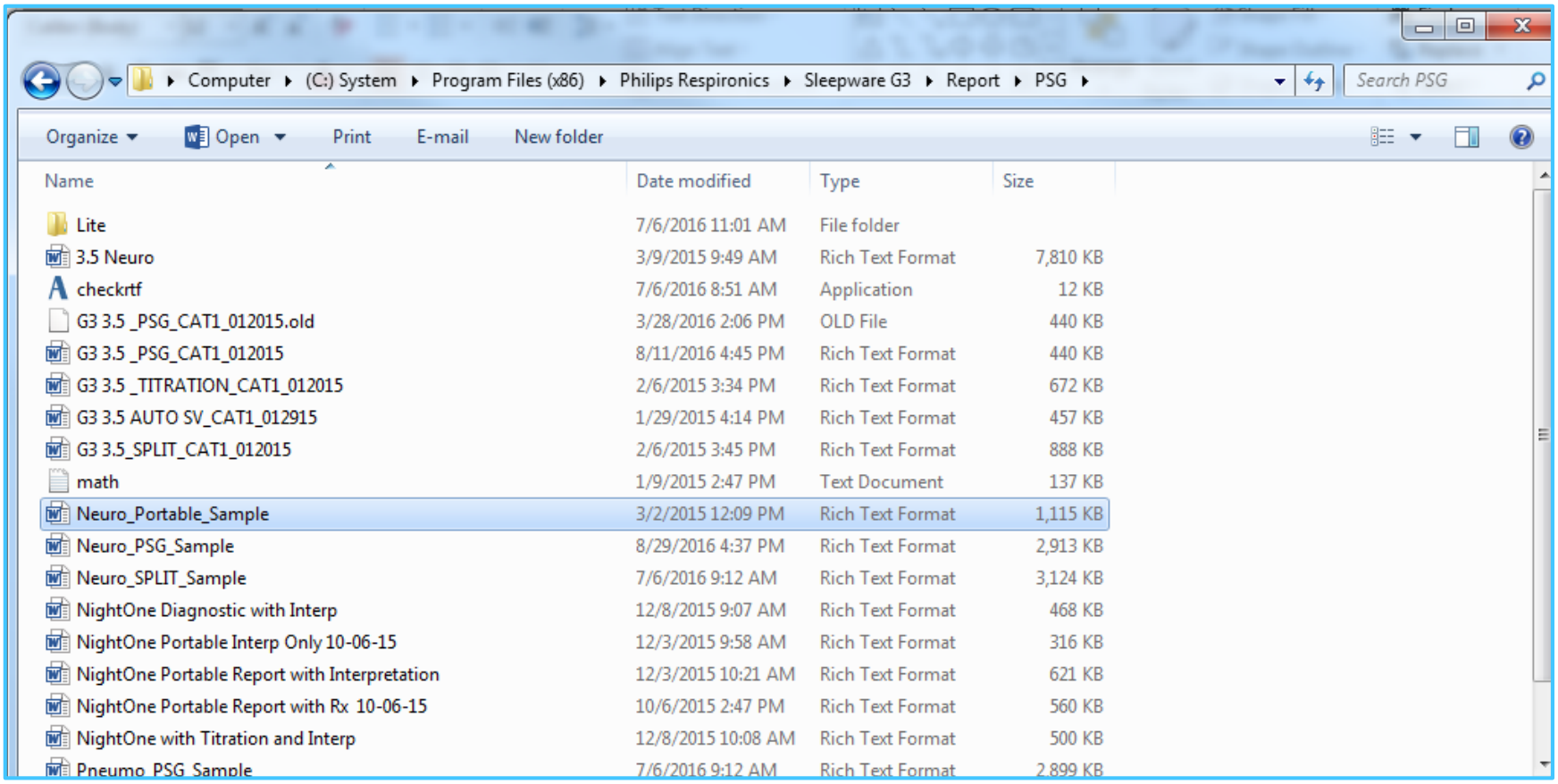
To access the online help, press the **F1** key on the computer keyboard or, from the main menu in Sleepware G3, select the **Help** tab and **Contents** from the dropdown menu.

Finding your report templates



To find your report templates, double left-click on the **Report Generation** tab on the Configuration page. The report templates location is listed under the **Input** section. In this example, the path is C:\Program Files (x86)\Philips Respironics\Sleepware G3\Report. You can copy and paste this location to Windows Explorer to quickly find it or you can browse to this location starting with the Windows Starter icon.

Browse to the report location and select the report to edit and add codes



Once the report folder is found, select the report type folder, for example PSG or MSLT.
Next, select the specific report in which you would like to add the chart code or codes.
Double left-click on that report to open it and scroll to the section where you want to add the header and chart codes. You can add multiple pie, column and bar charts to one report. You can also add these codes to several reports.

Pie charts

Pie charts are used to display distributions or proportional data (i.e., percentages). Examples of this, which will be shown in subsequent slides, are to display sleep stage percentages or % of time in a body position.

The format of the pie chart report code text is:
$PieChart *ChartCode,Size*$

The ChartCode specifies one of several chart codes that are used to display pie charts These codes are found in Sleepware G3's online help. The codes are also displayed on the next slide.

The *Size* parameter specifies the width of the chart.
The height of a pie chart is always 50% of the width.
The minimum size is 2000.
If a smaller size is specified, the minimum size of 2000 will automatically be used instead.

Chart code table

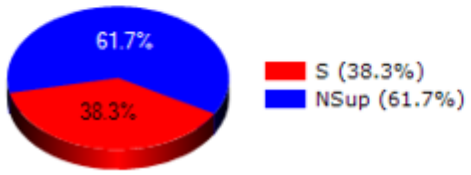
Chart Code	Description	Chart Types	Restrictions
1	Sleep stage distribution (percentages) during TIB	Pie, Bar, Column	
2	REM, NREM, Wake distribution (percentages) during TIB	Pie, Bar, Column	Neuro stage types only
10	Sleep stage durations during TIB	Bar, Column	
11	REM, NREM, Wake durations during TIB	Bar, Column	Neuro stage types only
18	Wake before, during, after sleep durations	Bar, Column	Neuro stage types only
20	Sleep onset latency (from LOFF) and REM latency (from sleep onset)	Bar, Column	Neuro stage types only
30	Body positions distribution (percentages) during SPT (neuro) or TIB (pneumo)	Pie, Bar, Column	
31	Supine vs. Non-Supine distribution (percentages) during SPT (neuro) or TIB (pneumo)	Pie, Bar, Column	
32	Body positions distribution (percentages) during TST	Pie, Bar, Column	
33	Supine vs. Non-Supine distribution (percentages) during TST	Pie, Bar, Column	
40	Body positions durations during SPT (neuro) or TIB (pneumo)	Bar, Column	
41	Supine vs. Non-Supine durations during SPT (neuro) or TIB (pneumo)	Bar, Column	
42	Body positions durations during TST	Bar, Column	
43	Supine vs. Non-Supine durations during TST	Bar, Column	
50	Event counts during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
60	Event indexes during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
70	RDI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
71	AHI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	

For instance, if you wanted a Pie chart to display Supine vs Non-Supine distribution (percentage) during TST, the code would be 33 and entered in the report template as: $PieChart 33, 2000$

Supine vs Non-Supine distribution (%) during TST. $PieChart 33, 2000$

RESPIRATORY EVENTS (BY BODY POSITION)

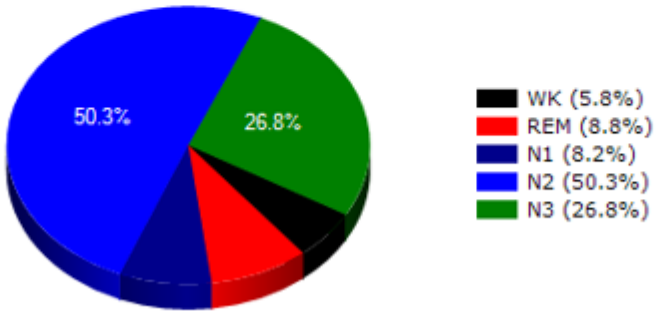
	Duration (min)	Sleep (%)	REM (%)	NREM (%)	CA (#)	OA (#)	MA (#)	HYP (#)	AHI (#/h)	RERA (#)	RDI (#/h)	Desat (#)
Supine	167.5	96.4	0.9	95.5	5	17	0	29	19.0	4	20.4	49
Left:	126.6	97.9	29.6	68.3	4	3	1	3	5.3	0	5.3	12
Prone:	71.4	98.2	0.7	97.5	0	1	0	0	0.9	0	0.9	0
Right:	71.0	92.3	0.0	92.3	1	0	0	0	0.9	0	0.9	1



Supine vs Non-Supine distribution (percentage) during TST.
The chart code added to the report is 33 and is entered in the report template as:
$PieChart 33, 2000$

Pie Chart: Sleep stage distribution percentage during TIB

Sleep Staging	Duration	% TST	Latency (from LOFF)	
N 1:	36.5 minutes	8.7 %	N 1:	10.5 minutes
N 2:	225.0 minutes	53.4 %	N 2:	15.0 minutes
N 3:	120.0 minutes	28.5 %	N 3:	28.0 minutes
R:	39.5 minutes	9.4 %	R:	26.0 minutes



Sleep stage distribution (percentage) during TIB.

The chart code added to the report is 33 and is entered in the report template as:

$PieChart 1, 2000$

Bar & column charts

Bar and column charts are very similar to each other. The difference is that bar charts display their data horizontally and column charts display their data vertically. All of the chart codes described in the chart codes table can be used with bar and column charts. The bar and column chart commands come in two forms.

The simpler form is:

$BarChart *ChartCode,Width,Height*$

$ColChart *ChartCode,Width,Height*$

where *ChartCode* is any of the chart codes (except for codes 50, 60: codes 50 and 60 include event codes that will be used for the more complex bar and column charts).

The more complex form is:

$BarChart *ChartCode,NumEventCodes,EventCode1,EventCode2,…Width,Height*$

$ColChart *ChartCode,NumEventCodes,EventCode1,EventCode2,…Width,Height*$

All chart codes can be used in bar and column charts

Chart Code	Description	Chart Types	Restrictions
1	Sleep stage distribution (percentages) during TIB	Pie, Bar, Column	
2	REM, NREM, Wake distribution (percentages) during TIB	Pie, Bar, Column	Neuro stage types only
10	Sleep stage durations during TIB	Bar, Column	
11	REM, NREM, Wake durations during TIB	Bar, Column	Neuro stage types only
18	Wake before, during, after sleep durations	Bar, Column	Neuro stage types only
20	Sleep onset latency (from LOFF) and REM latency (from sleep onset)	Bar, Column	Neuro stage types only
30	Body positions distribution (percentages) during SPT (neuro) or TIB (pneumo)	Pie, Bar, Column	
31	Supine vs. Non-Supine distribution (percentages) during SPT (neuro) or TIB (pneumo)	Pie, Bar, Column	
32	Body positions distribution (percentages) during TST	Pie, Bar, Column	
33	Supine vs. Non-Supine distribution (percentages) during TST	Pie, Bar, Column	
40	Body positions durations during SPT (neuro) or TIB (pneumo)	Bar, Column	
41	Supine vs. Non-Supine durations during SPT (neuro) or TIB (pneumo)	Bar, Column	
42	Body positions durations during TST	Bar, Column	
43	Supine vs. Non-Supine durations during TST	Bar, Column	
50	Event counts during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
60	Event indexes during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
70	RDI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	
71	AHI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	

Chart event codes

Event codes are used in bar and column chart commands that specify chart code 50 (event counts) or 60 (event indexes). The table below defines the event type codes that can be used in chart commands.

Event Code	Event Type	Chart Types
300	Central Apnea	Bar, Column, Pie
301	Obstructive Apnea	Bar, Column, Pie
302	Mixed Apnea	Bar, Column, Pie
303	Hypopnea (all hypopneas)	Bar, Column, Pie
340	RERA	Bar, Column, Pie
380	Unclassified Hypopnea	Bar, Column, Pie
381	Central Hypopnea	Bar, Column, Pie
382	Obstructive Hypopnea	Bar, Column, Pie
383	Apneas (all apneas)	Bar, Column, Pie
384	Apneas + Hypopneas (all apneas + all hypopneas)	Bar, Column, Pie
385	Respiratory (all apneas + all hypopneas + RERAs)	Bar, Column, Pie

RDI bar chart (REI for portable study)

Report showing the simpler bar chart using code: $BarChart Ch*artCode,Width,Height*$

$BarChart, 70, 5000,620$

70 = RDI (REI)

70	RDI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

Summary

REI	6174	OAI	718	CAI	717	Lowest Desat	899

REI is the number of respiratory events per hour. OAI is the number of obstructive apneas per hour. CAI is the number of central apneas per hou
Lowest Desat is the lowest blood oxygen level that lasted at least 2 seconds.$ENDSECTION$$SECTION Respiratory Summary$
$BarChart,70,5000,600$

This BarChart code for AHI & RDI (REI) results in a color coded REI (Respiratory Event Index). Green represents an REI of 0-5, Yellow 5-15, Orange, 16-30, and Red 31 and above.

Summary

REI	62.5	OAI	20.0	CAI	0.3	Lowest Desat	78

REI is the number of respiratory events per hour. OAI is the number of obstructive apneas per hour. CAI is the number of central apneas per hour.
Lowest Desat is the lowest blood oxygen level that lasted at least 2 seconds.

AHI bar chart

Report showing the simpler bar chart using code: $BarChart Ch*artCode,Width,Height*$

$BarChart, 71, 5000,620$

71 = AHI

71	AHI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	

Summary

REI	6174	OAI	718	CAI	717	Lowest Desat	899

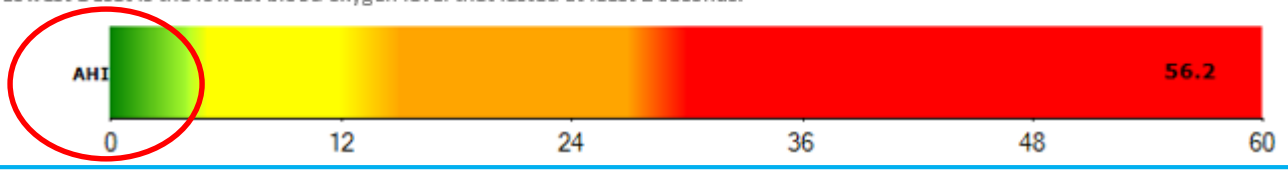
REI is the number of respiratory events per hour. OAI is the number of obstructive apneas per hour. CAI is the number of central apneas per hour. Lowest Desat is the lowest blood oxygen level that lasted at least 2 seconds.**$ENDSECTION$**$SECTION Respiratory Summary$

$BarChart 71,5000,600$

Summary

REI	62.5	OAI	20.0	CAI	0.3	Lowest Desat	78

REI is the number of respiratory events per hour. OAI is the number of obstructive apneas per hour. CAI is the number of central apneas per hour. Lowest Desat is the lowest blood oxygen level that lasted at least 2 seconds.



50	Event counts during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column	

More complex bar & column chart report codes

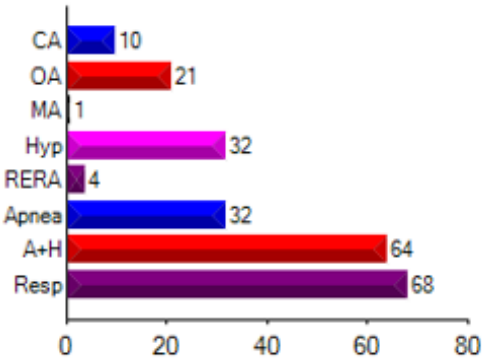
$BarChart 50,8,300,301,302, 303,340,383,384,385,2000,1500$

$ColChart 50,8,300,301,302, 303,340,383,384,385,2000,1500$

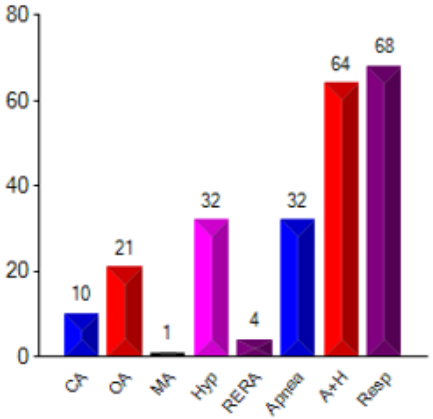
8 event types

Size of chart

Event Code	Event Type	Chart Types
300	Central Apnea	Bar, Column, Pie
301	Obstructive Apnea	Bar, Column, Pie
302	Mixed Apnea	Bar, Column, Pie
303	Hypopnea (all hypopneas)	Bar, Column, Pie
340	RERA	Bar, Column, Pie
380	Unclassified Hypopnea	Bar, Column, Pie
381	Central Hypopnea	Bar, Column, Pie
382	Obstructive Hypopnea	Bar, Column, Pie
383	Apneas (all apneas)	Bar, Column, Pie
384	Apneas + Hypopneas (all apneas + all hypopneas)	Bar, Column, Pie
385	Respiratory (all apneas + all hypopneas + RERAs)	Bar, Column, Pie



Bar chart: event count TST



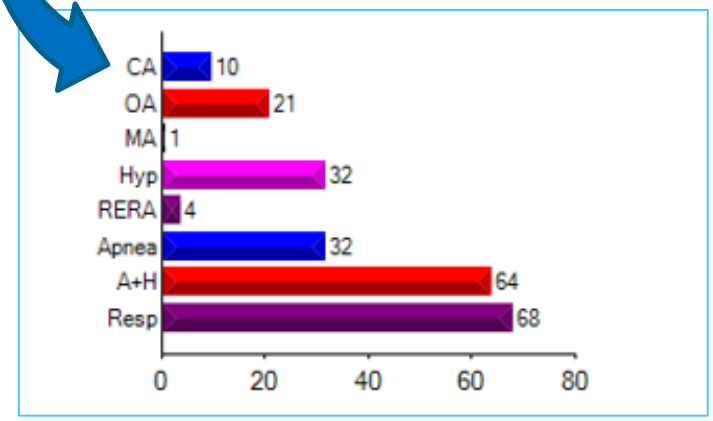
Column chart: event count TST

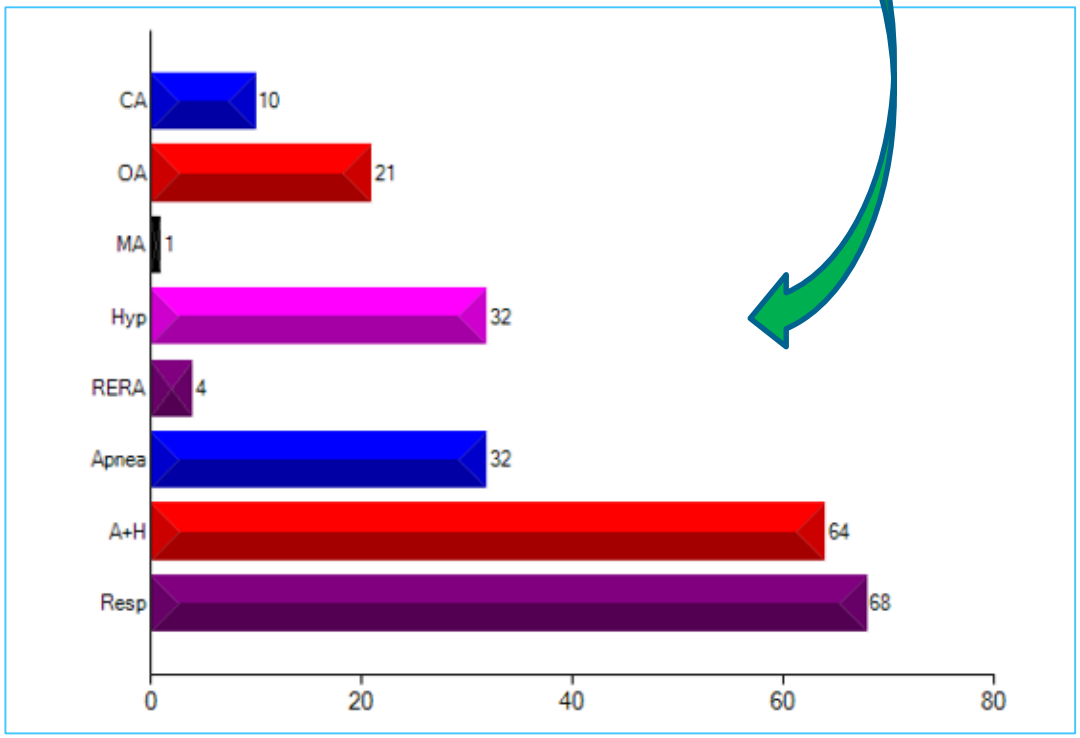
Chart sizing

$BarChart **50**,8,300,301,302, 303,340,383,384,385,**2000,1500**$

$BarChart **50**,8,300,301,302, 303,340,383,384,385,4000,30000$

In this example, compared to the last example on the previous slide, the chart size was increased.



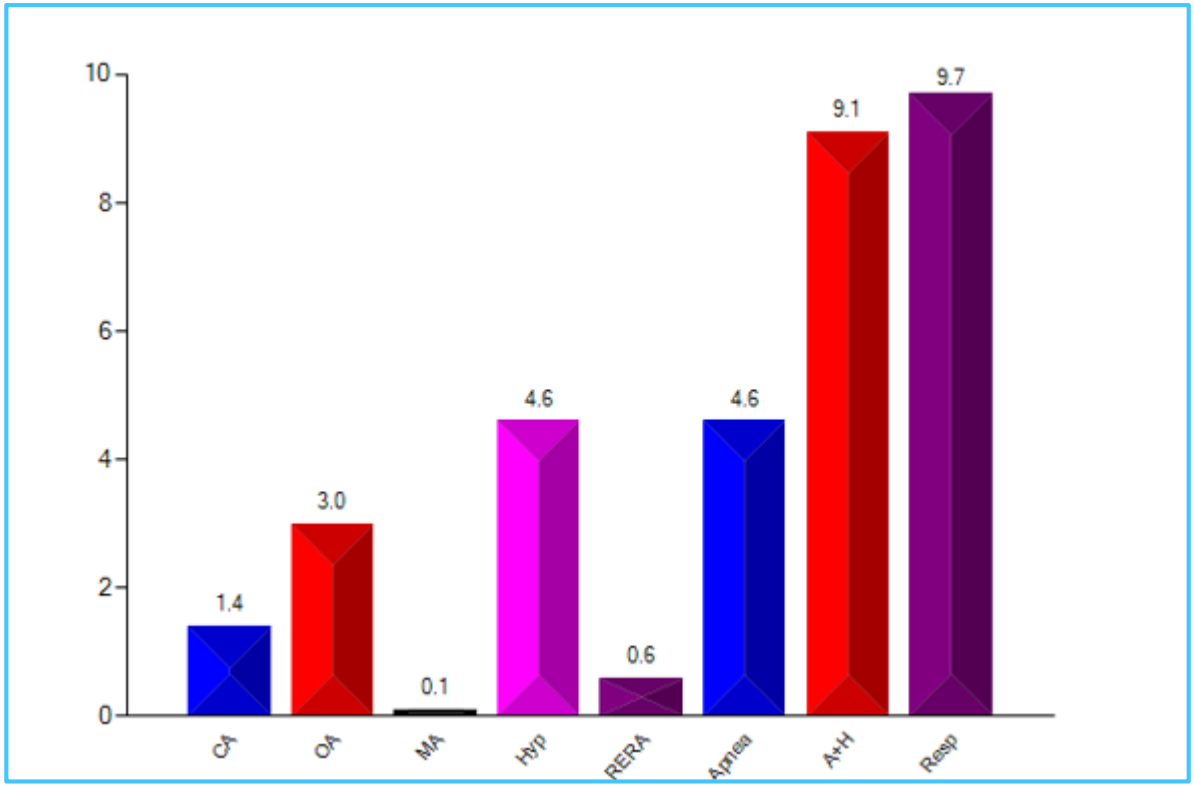


50	Event counts during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

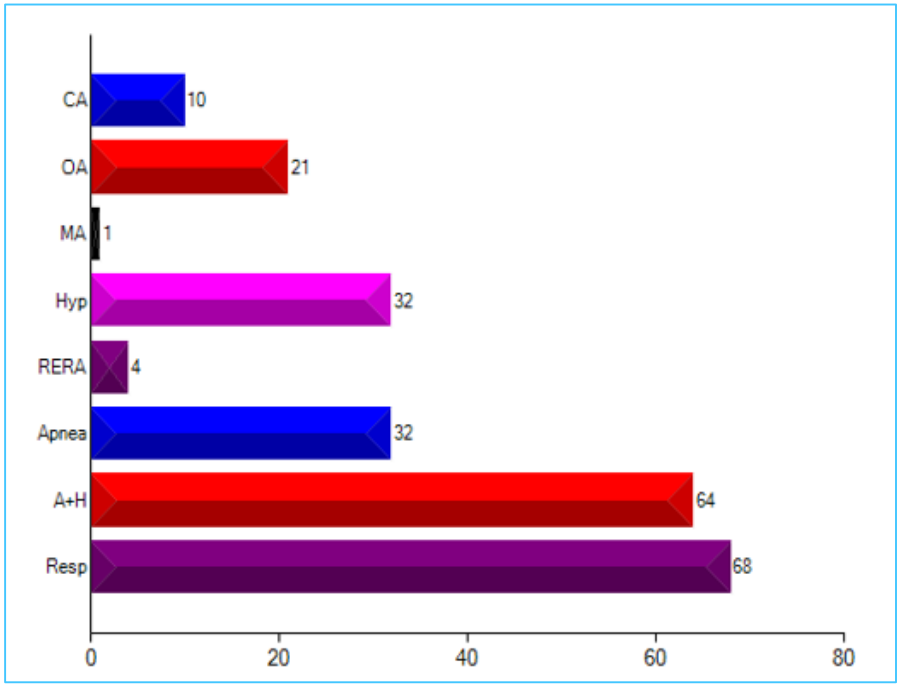
Change of column chart code from 50 to 60 to display **Event Indices** instead of event count

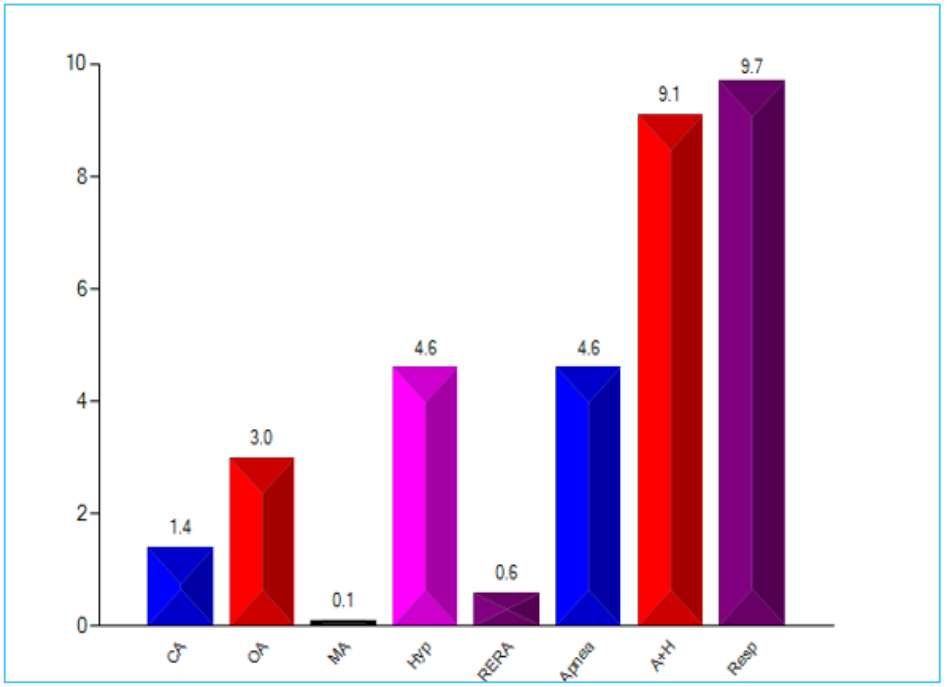
60	Event indexes during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

ColChart **60,**8,300, 301,302, 303,340,383,384,385,4000,3000$



Bar chart showing event totals
Column chart showing event indices





$BarChart **50**,8,300,301,302, 303,340,383,384,385,4000,3000$

50	Event counts during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

$ColChart **60**,8,300, 301,302, 303,340,383,384,385,4000,3000$

60	Event indexes during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

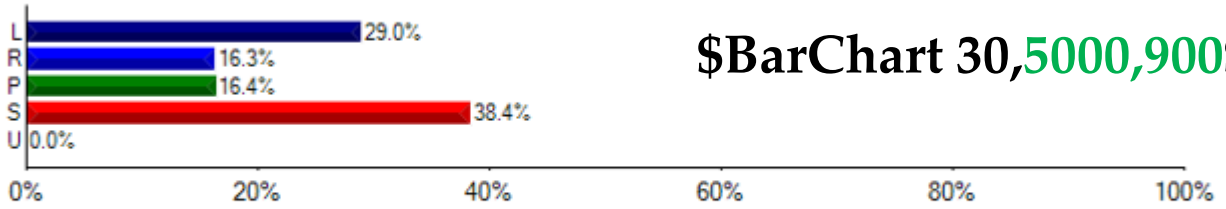
Body position percentages

30	Body positions distribution (percentages) during SPT (neuro) or TIB (pneumo)	Pie, Bar, Column

RESPIRATORY EVENTS (BY BODY POSITION)

	Duration (min)	Sleep (%)	REM (%)	NREM (%)	CA (#)	OA (#)	MA (#)	HYP (#)	AHI (#/h)	RERA (#)	RDI (#/h)	Desat (#)
Supine	167.5	96.4	0.9	95.5	5	17	0	29	19.0	4	20.4	49
Left:	126.6	97.9	29.6	68.3	4	3	1	3	5.3	0	5.3	12
Prone:	71.4	98.2	0.7	97.5	0	1	0	0	0.9	0	0.9	0
Right:	71.0	92.3	0.0	92.3	1	0	0	0	0.9	0	0.9	1

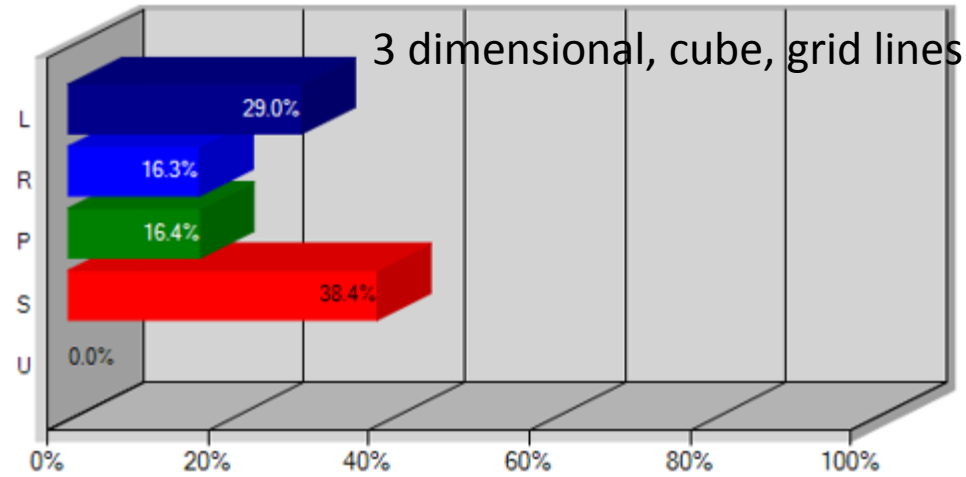
2 dimensional, wedge



$BarChart 30,5000,900$

size change

3 dimensional, cube, grid lines



$BarChart 30,4000,2000$

Column charts that display **individual event counts** by type and a summary of **combined respiratory event counts**. The IF statement will allow reporting for SPT vs TST depending on the setting for keep events in wakefulness.

Respiratory Events Indexes $IF V155=1$(SPT)$ELSE$(TST)$ENDIF$

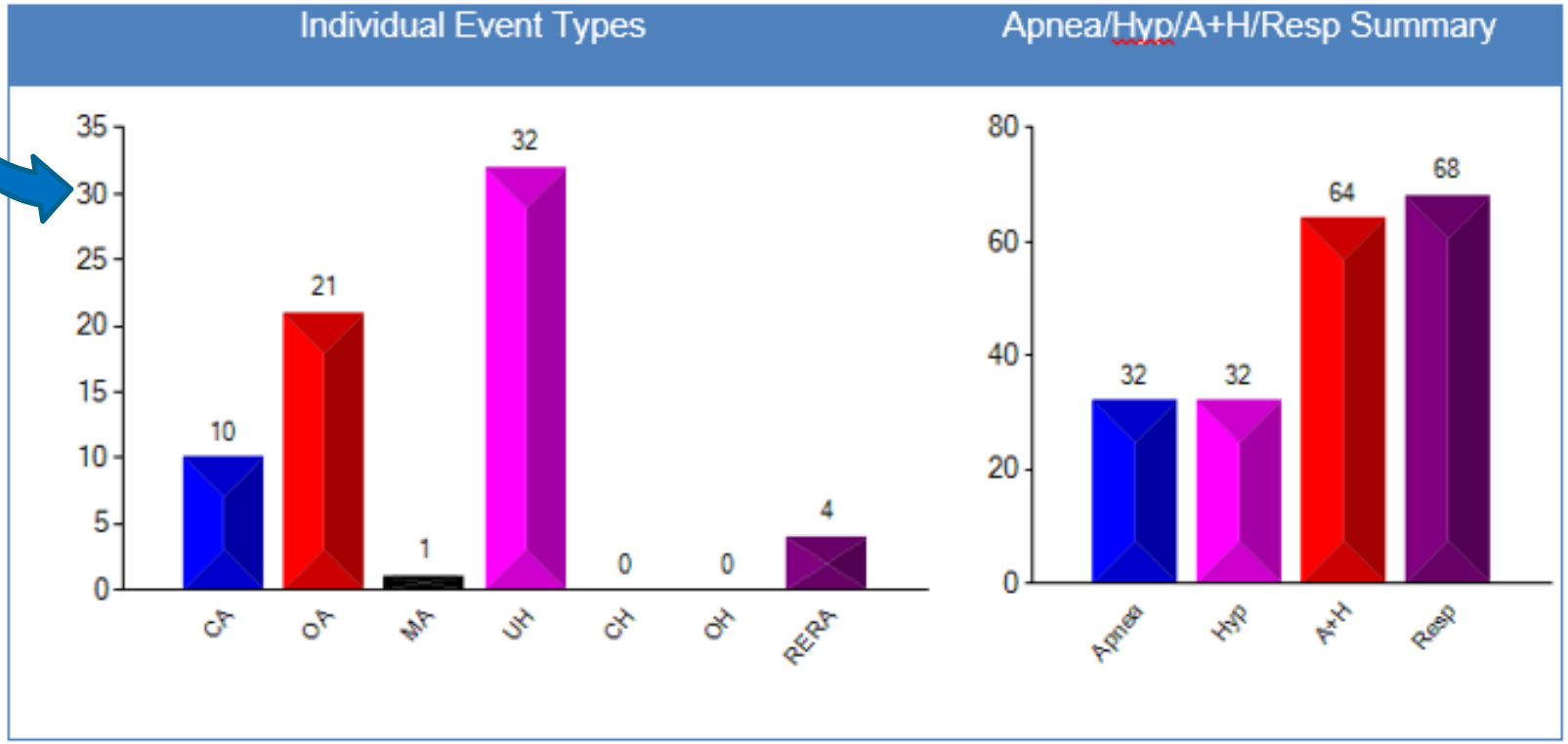
Individual Event Types

$ColChart 50,7,300,301,302,380,381,382,340,3000,2000$

Apnea/Hyp/A+H/Resp Summary

$ColChart 50,4,383,303,384,385,2000,2000$

Respiratory Events Counts (TST)



Column charts that display individual event **indexes** by type and combined respiratory event **indexes**. The IF statement will allow reporting for SPT vs TST depending on the setting for keep events in wakefulness.

Respiratory Events Indexes $IF V155=1$(SPT)$ELSE$(TST)$ENDIF$

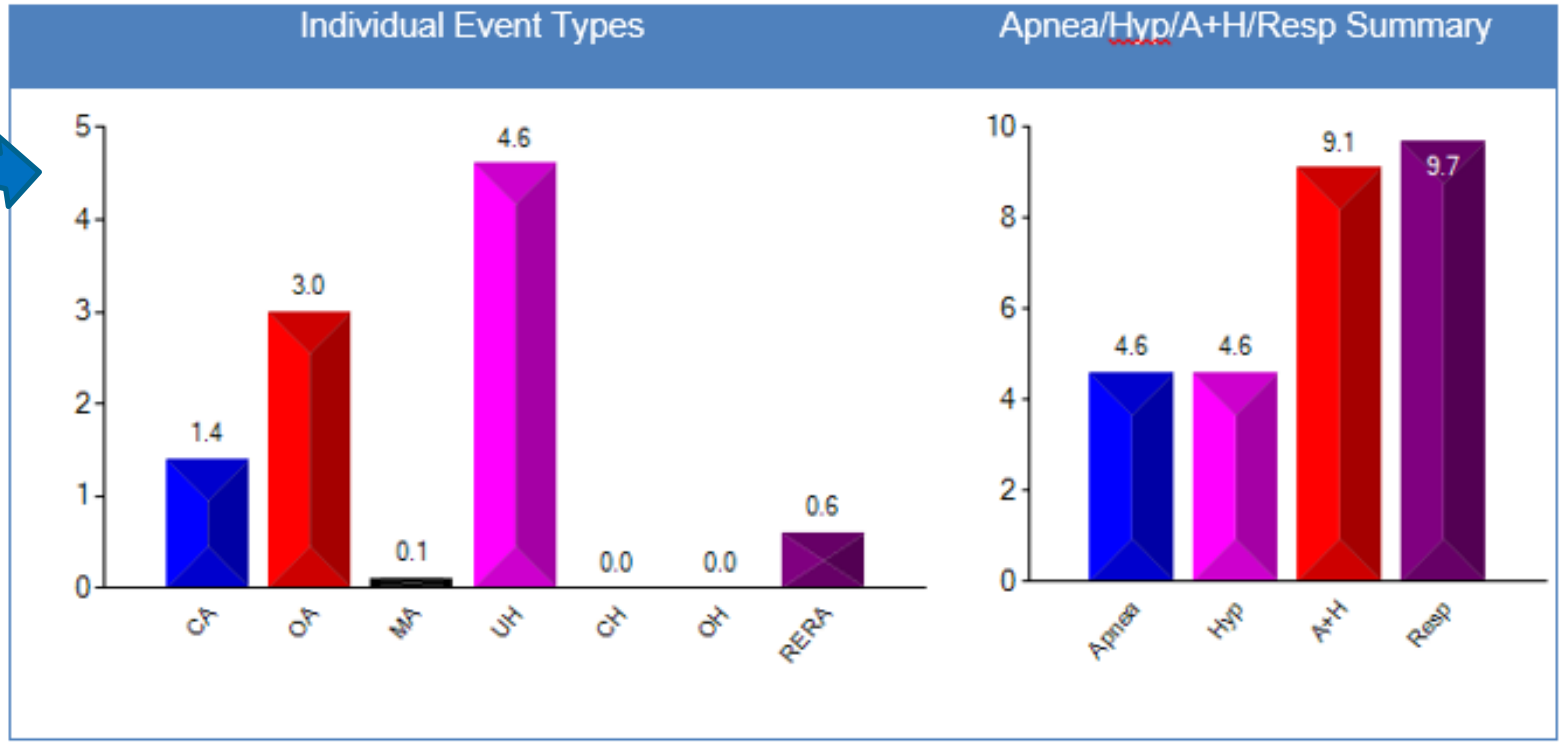
Individual Event Types

$ColChart 60,7,300,301,302,380,381,382,340,3000,2000$

Apnea/Hyp/A+H/Resp Summary

$ColChart 60,4,383,303,384,385,2000,2000$

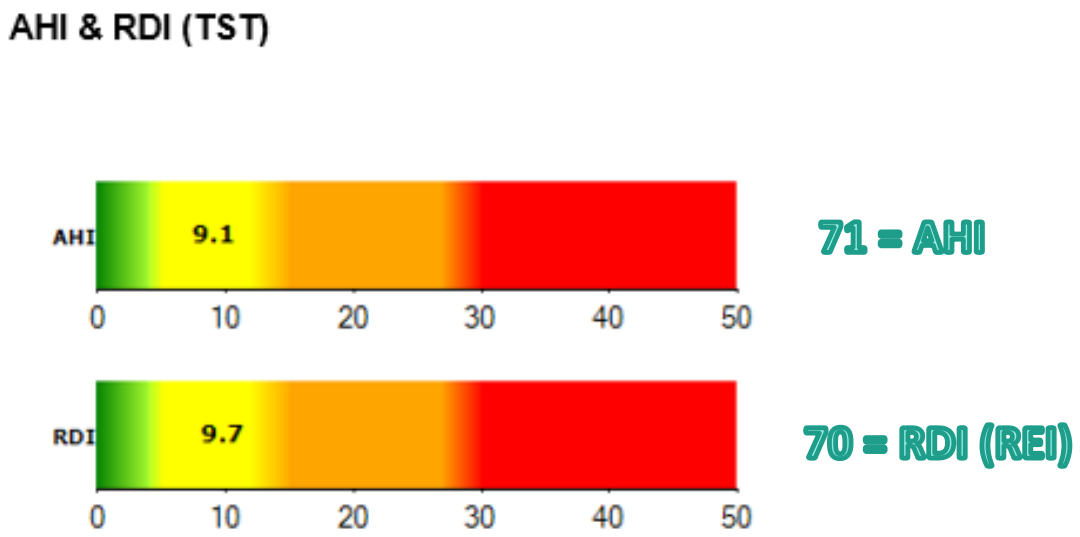
Respiratory Events Indexes (TST)



Bar Charts to display AHI and RDI on same report

AHI & RDI $IF V155=1$(SPT)$ELSE$(TST)$ENDIF$

$BarChart 71,2500,600$ $BarChart 70,2500,600$
$ENDSECTION$$ENDSECTION$$SECTION Heart Rate Summary$



70	RDI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

71	AHI during SPT or TST (TIB or TST for pneumo) depending on whether events are kept in wake.	Bar, Column

Thank you

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

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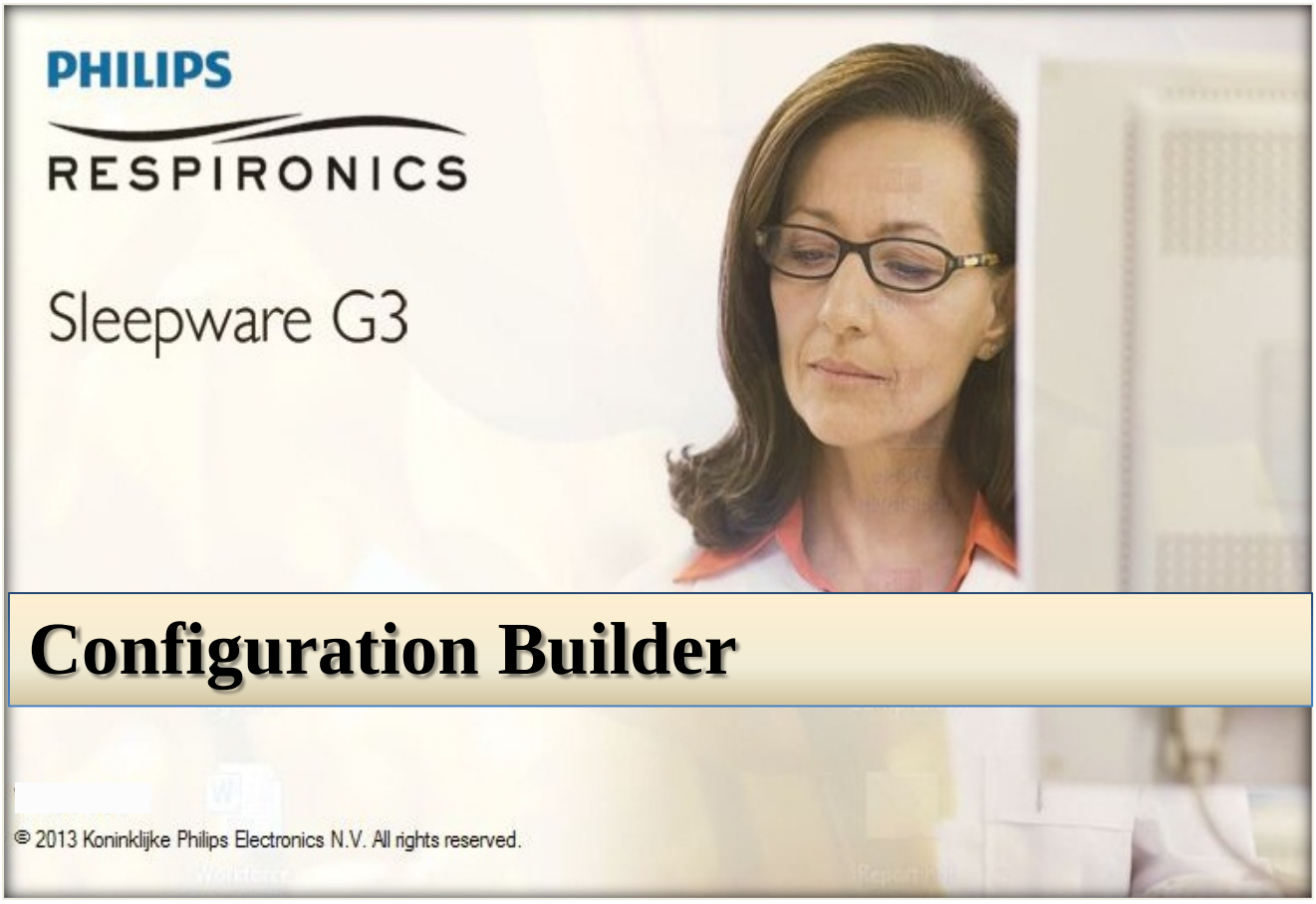
RPM 09/15/2016

PHILIPS

G3 Training Module

PHILIPS

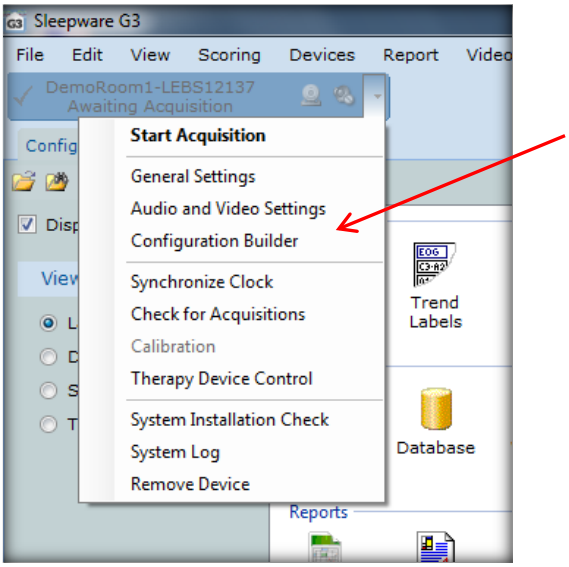


Configuration Builder

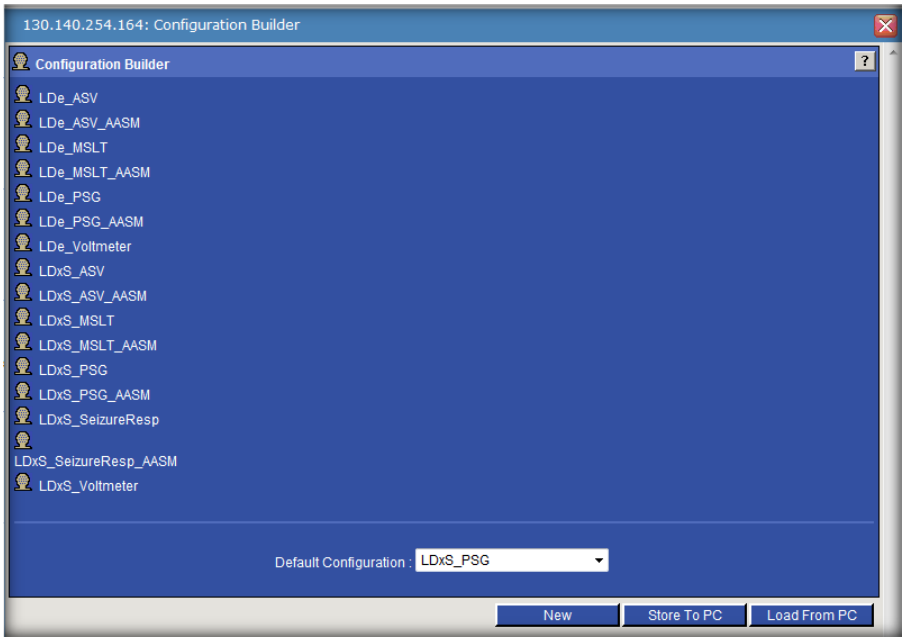
PHILIPS

Building an Alice Device Configuration

To build or modify a configuration (i.e., a set of channels used to acquire polysomnographic data) for use with Alice 6 devices, select **Configuration Builder** from the drop-down menu.



The Configuration Builder window lists the configurations available on the selected device. You may select configuration to modify or you may build a new configuration.

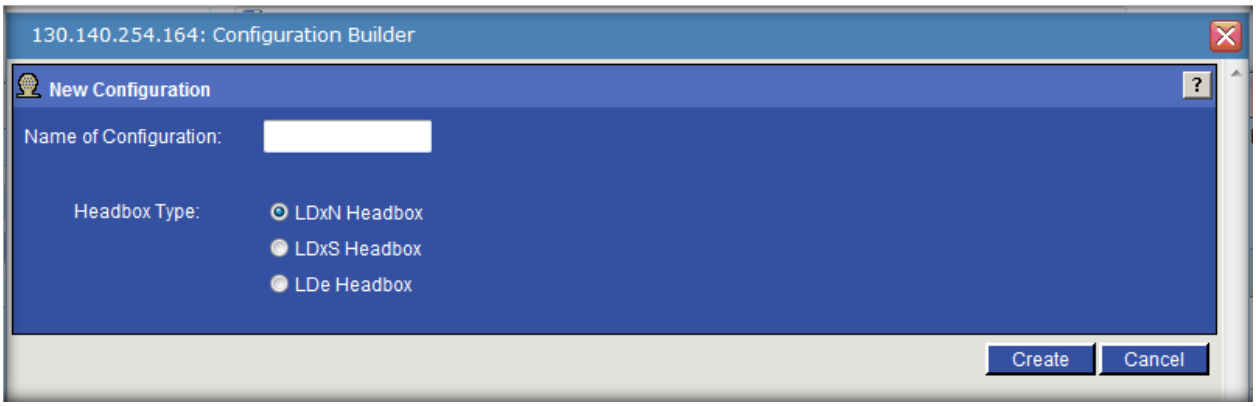


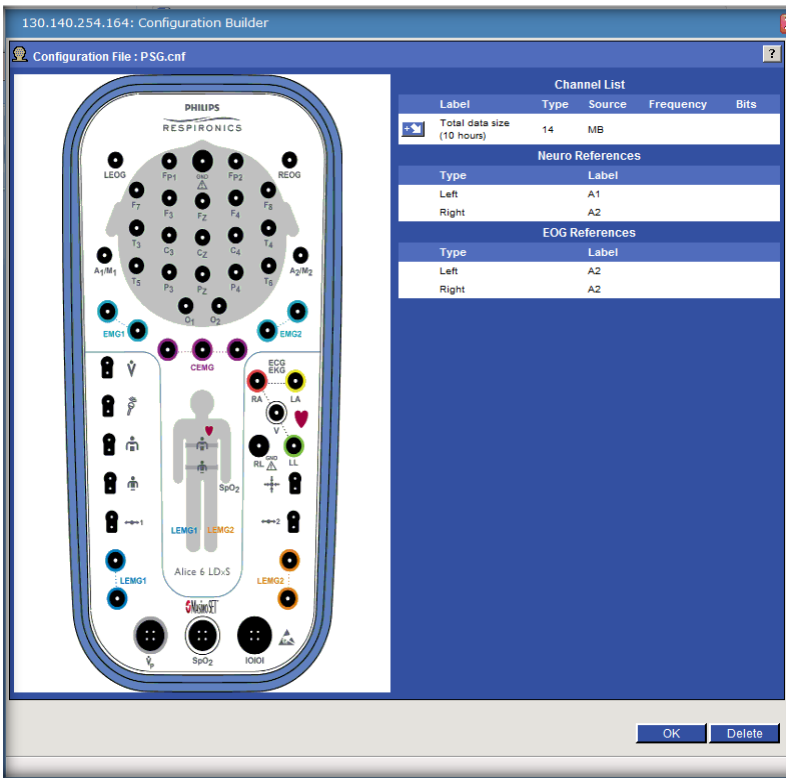
* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

Click the New button. A Configuration File window opens.

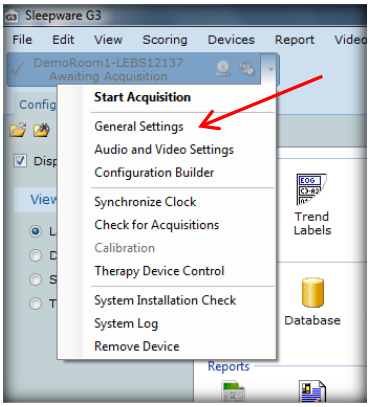
Type a name for the new configuration file, select the applicable Headbox Type, and click Create to continue.

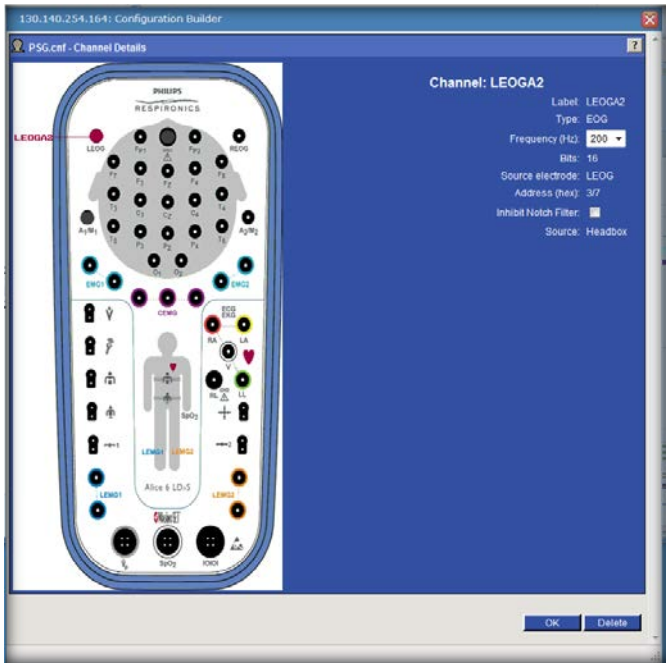
The Configuration File opens. A picture of the headbox appears along with the channel list.



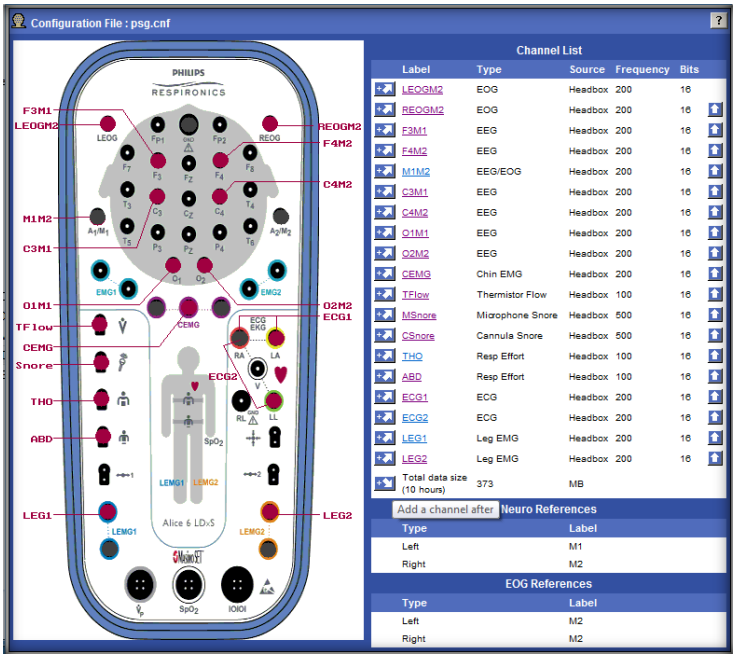


You can change your Neuro and EOG References from the General Settings on the base station.





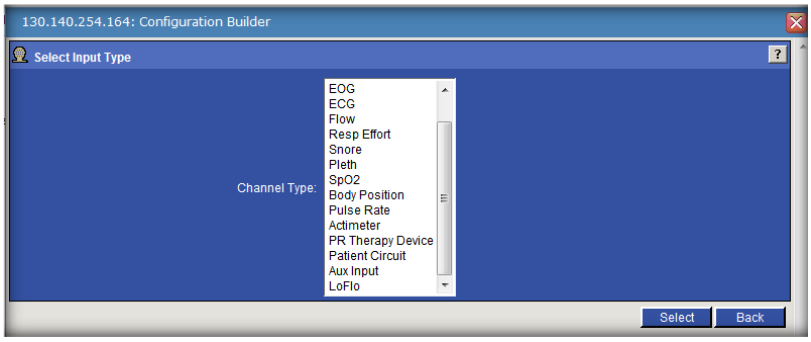
Click on the channel label and the Channel Details window opens.
Make any necessary changes to the settings (e.g., the Frequency [recorded sampling rate], the Bits [resolution], and the Inhibit Notch Filter setting). Click OK to continue.
These steps work for all labels on the headbox except for .



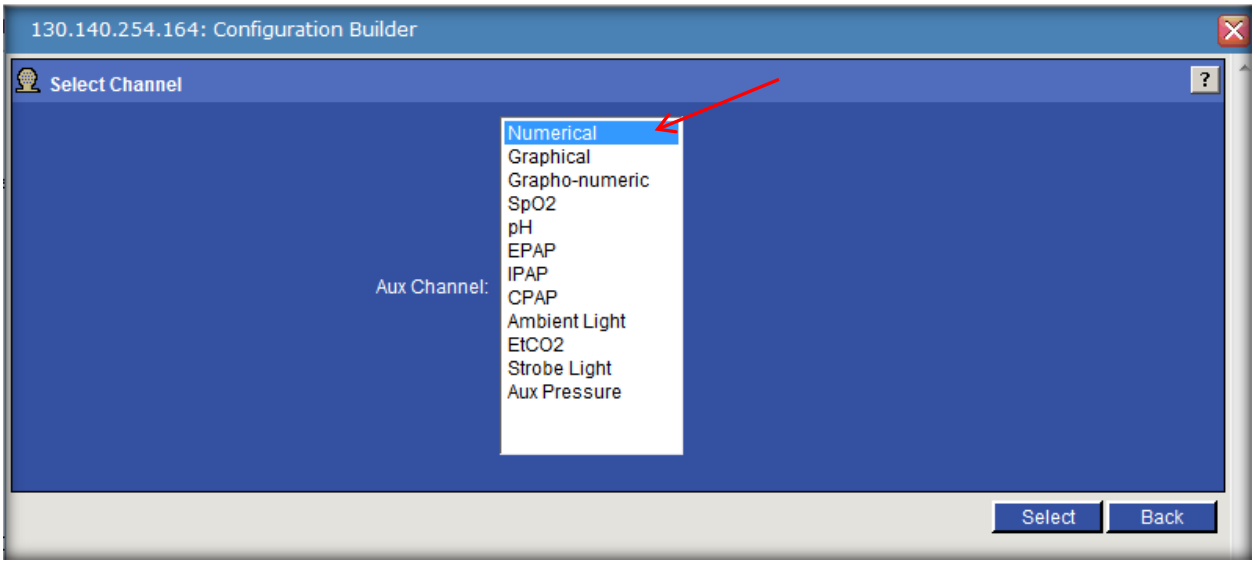
Any additional channels may be added by clicking on

Select a channel type and click Select to continue (or Back to abort).

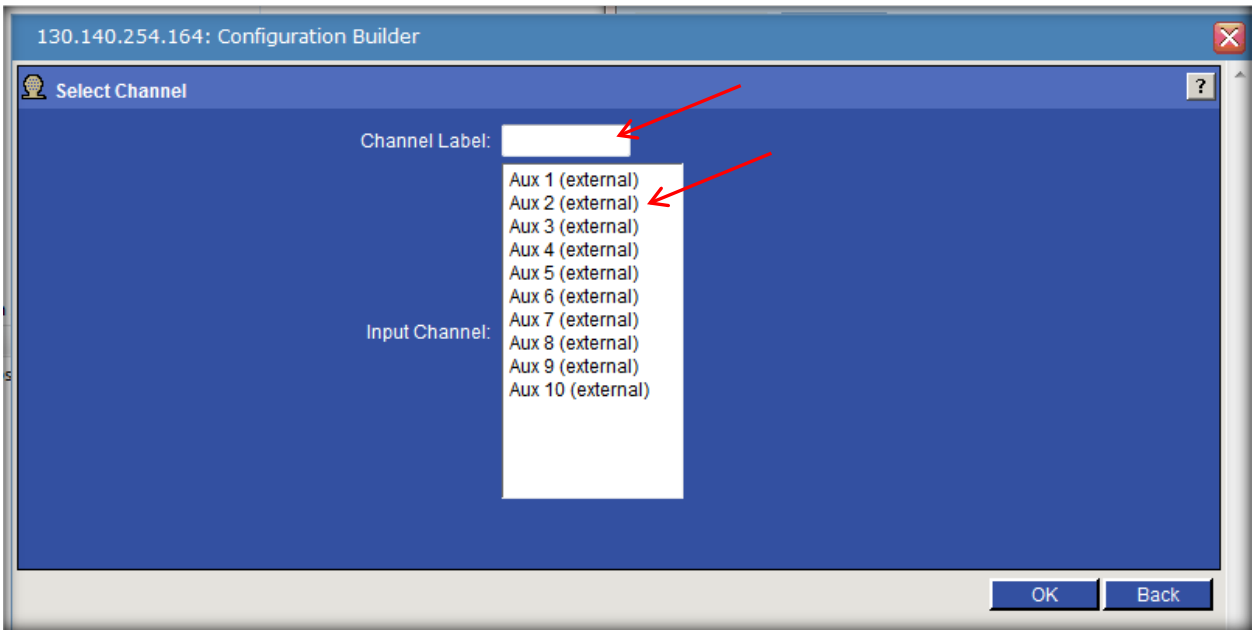
The Select Channel window opens.



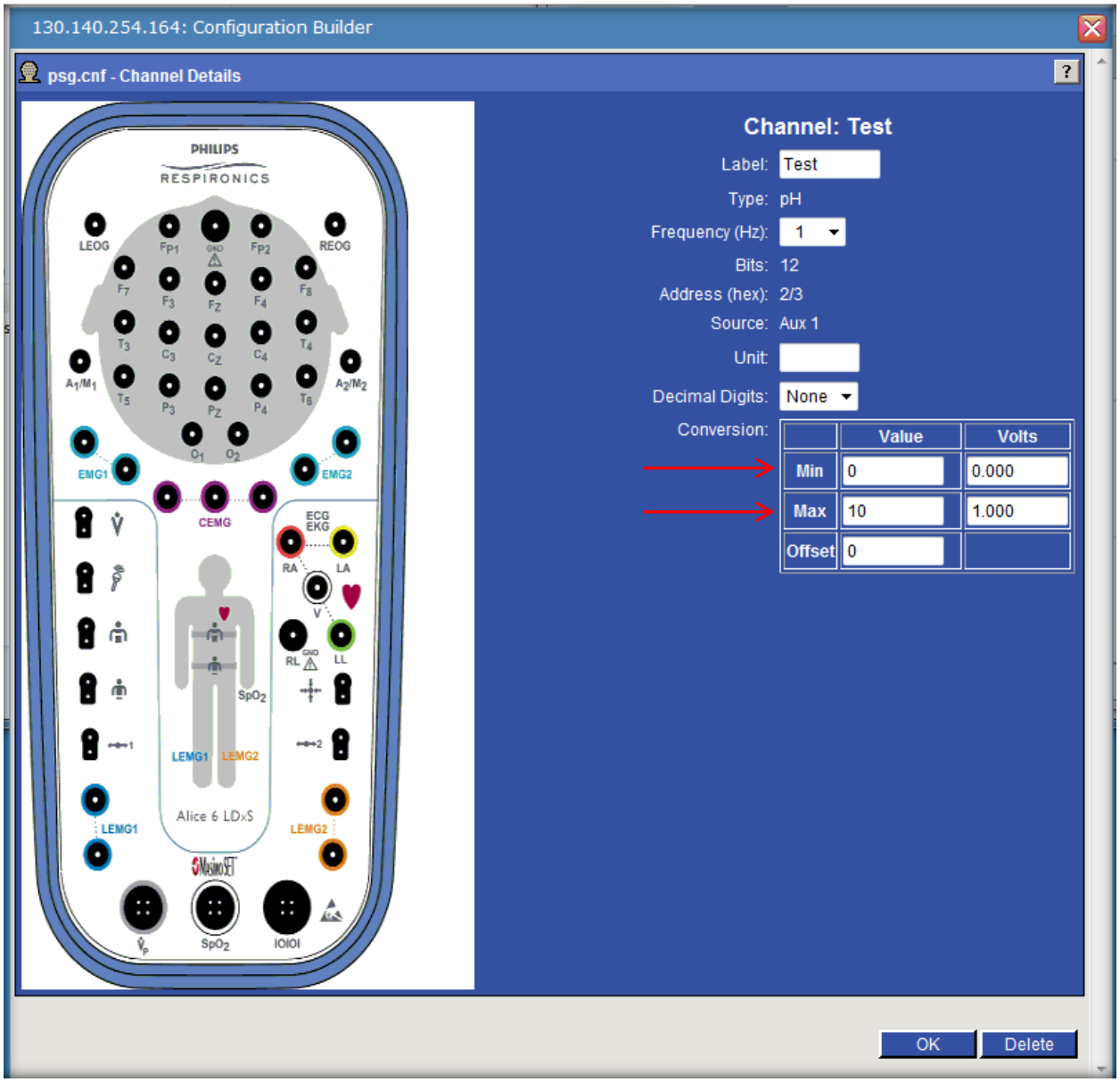
* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.



For Auxiliary Channels choose the channel type.



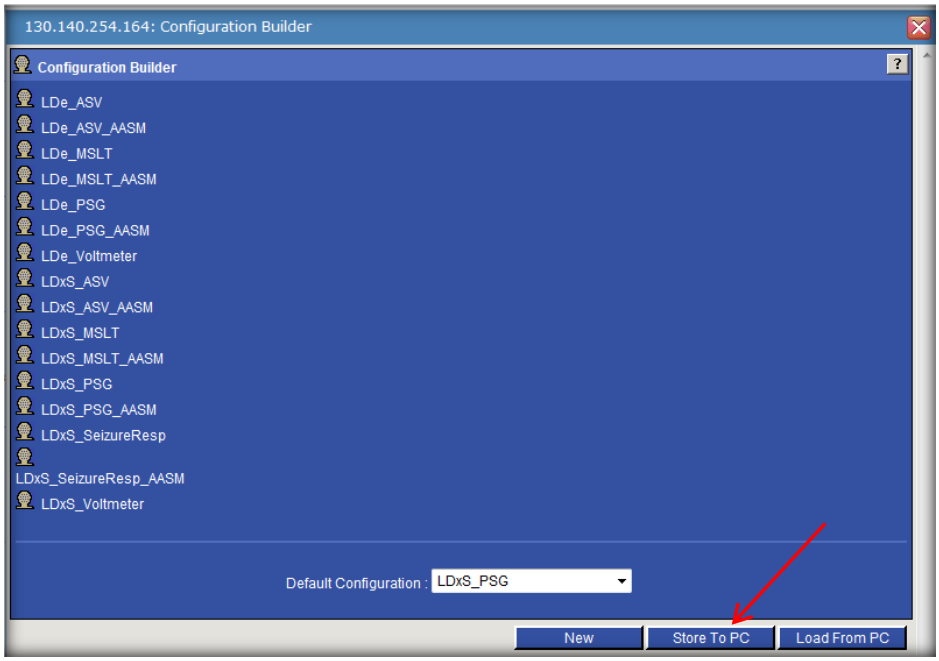
Choose the Auxiliary port and input the Channel Label.



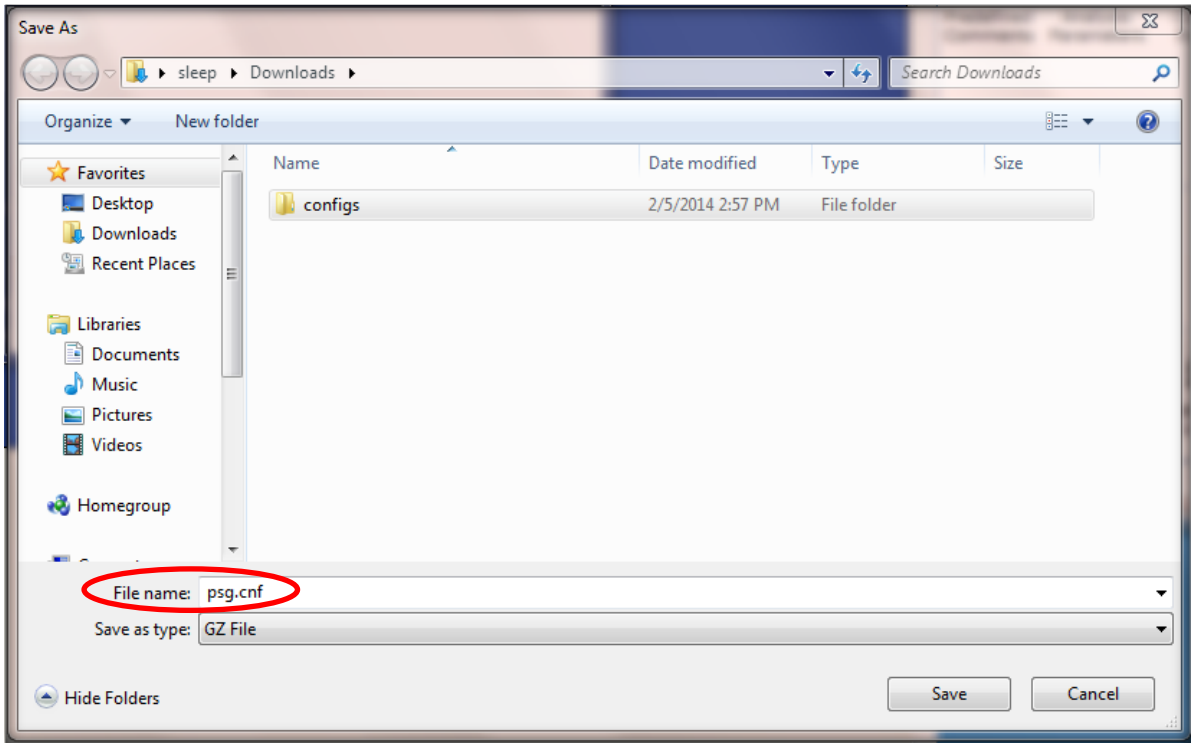
Input Min/Max values for specific voltages.

PHILIPS

Once the configuration is built, it is suggested that you save it to your computer. This will allow you to reload the configuration as well as transfer configurations between Alice devices.



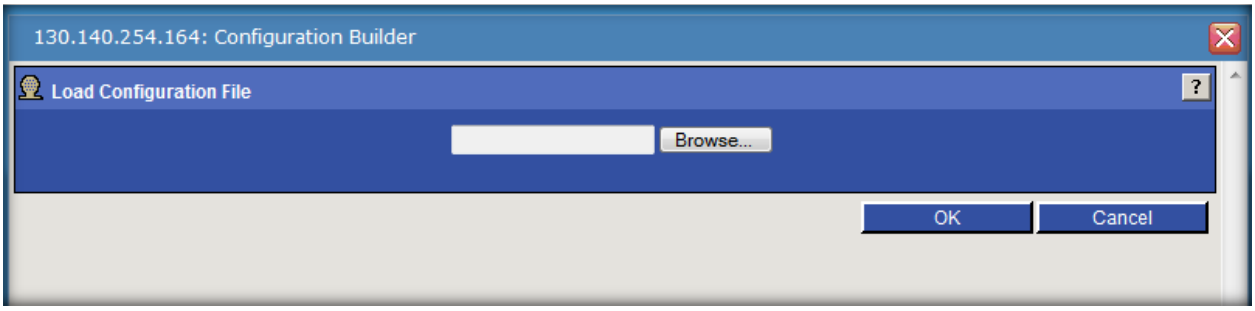
From the Configuration Builder, click the 'Store To PC' button and select the configuration you want to store. Click Save. The Save As window opens. Select a location on your computer where you want to save the configuration (e.g., desktop) and click Save.

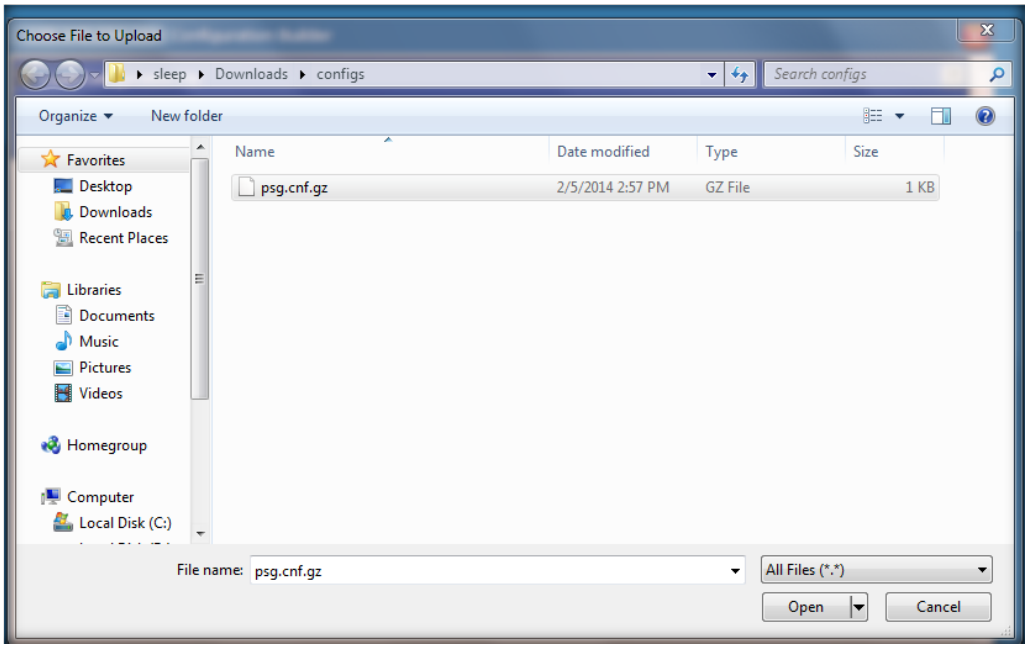


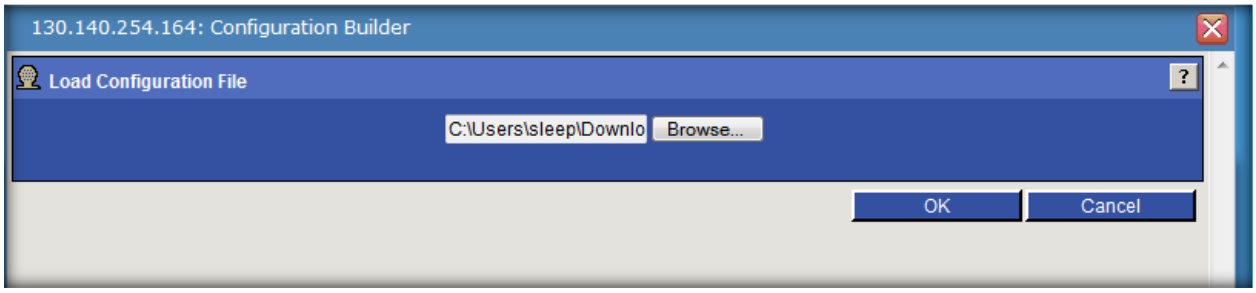
Note: *The File Name must end with .cnf*

PHILIPS

To upload a configuration to an Alice base unit select the 'Load From PC' in the Configuration Builder, and then the following window opens. Click 'Browse' button to locate and select the configuration file and click on Open.





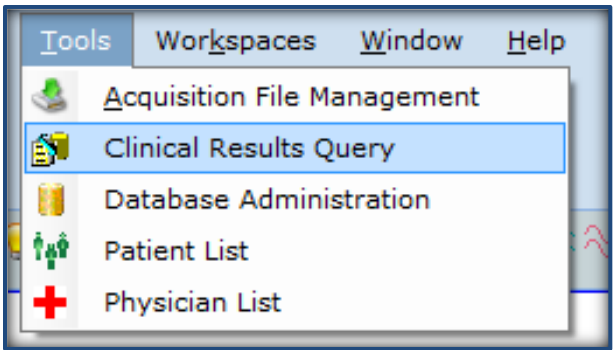


Consult the manual for additional information.

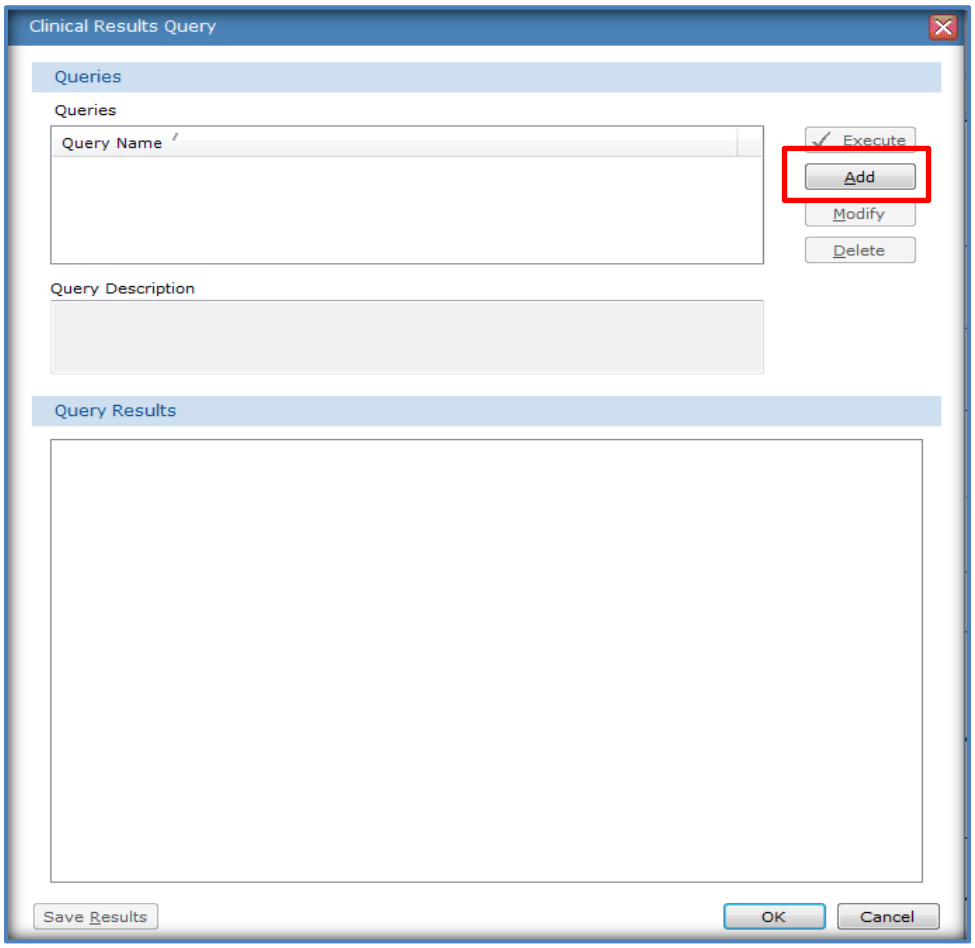
* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

How to Create a Database Query in Sleepware G3 to Show Primary and Secondary Diagnosis for All Patients

1. **Create a Clinical Results Query that will show all patients in the database along with their primary and secondary diagnosis. Within Sleepware G3, select Tools > Clinical Results Query.**

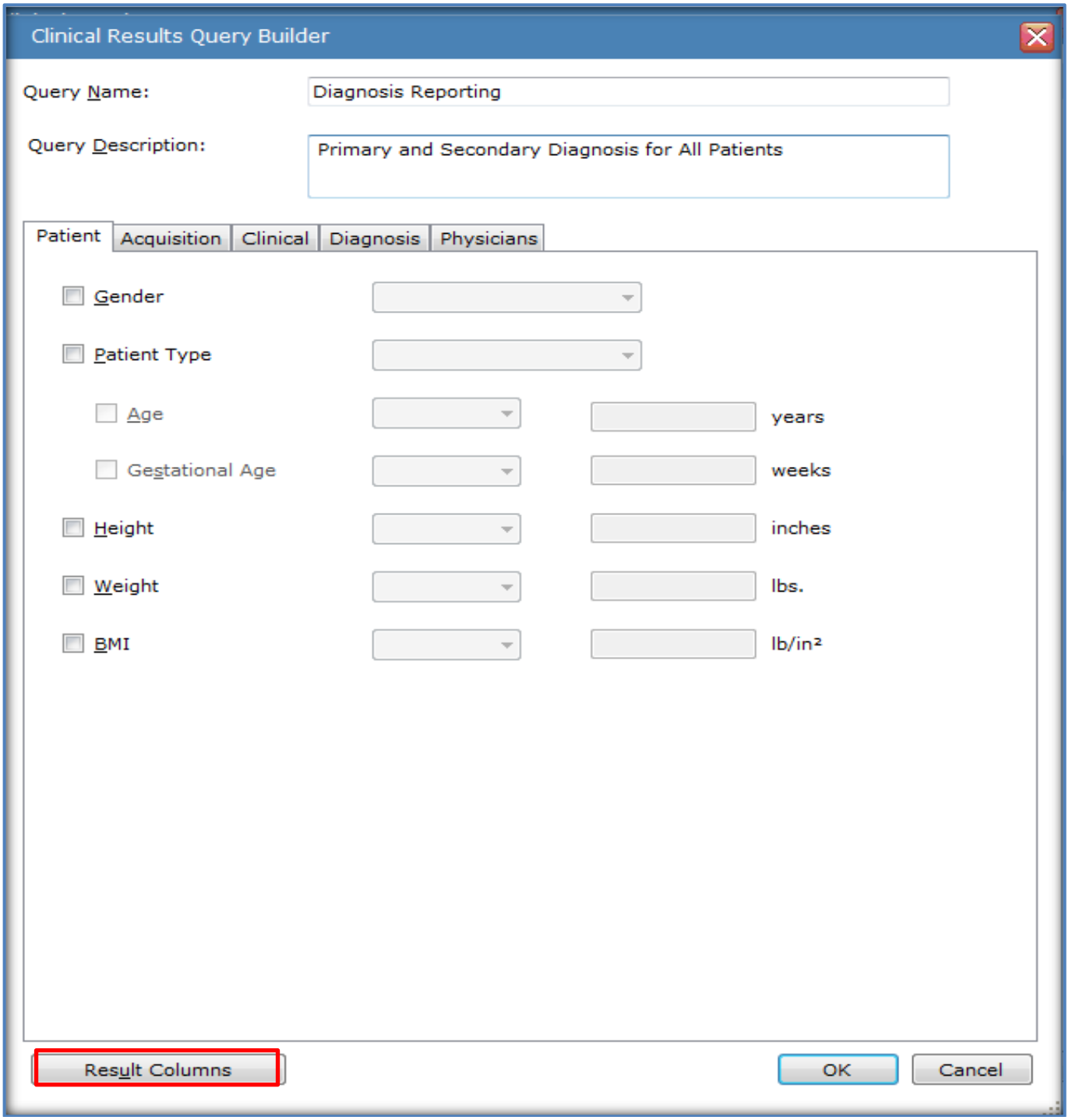


2. **The Clinical Results Query dialog box will open. Select <u>Add</u>.**

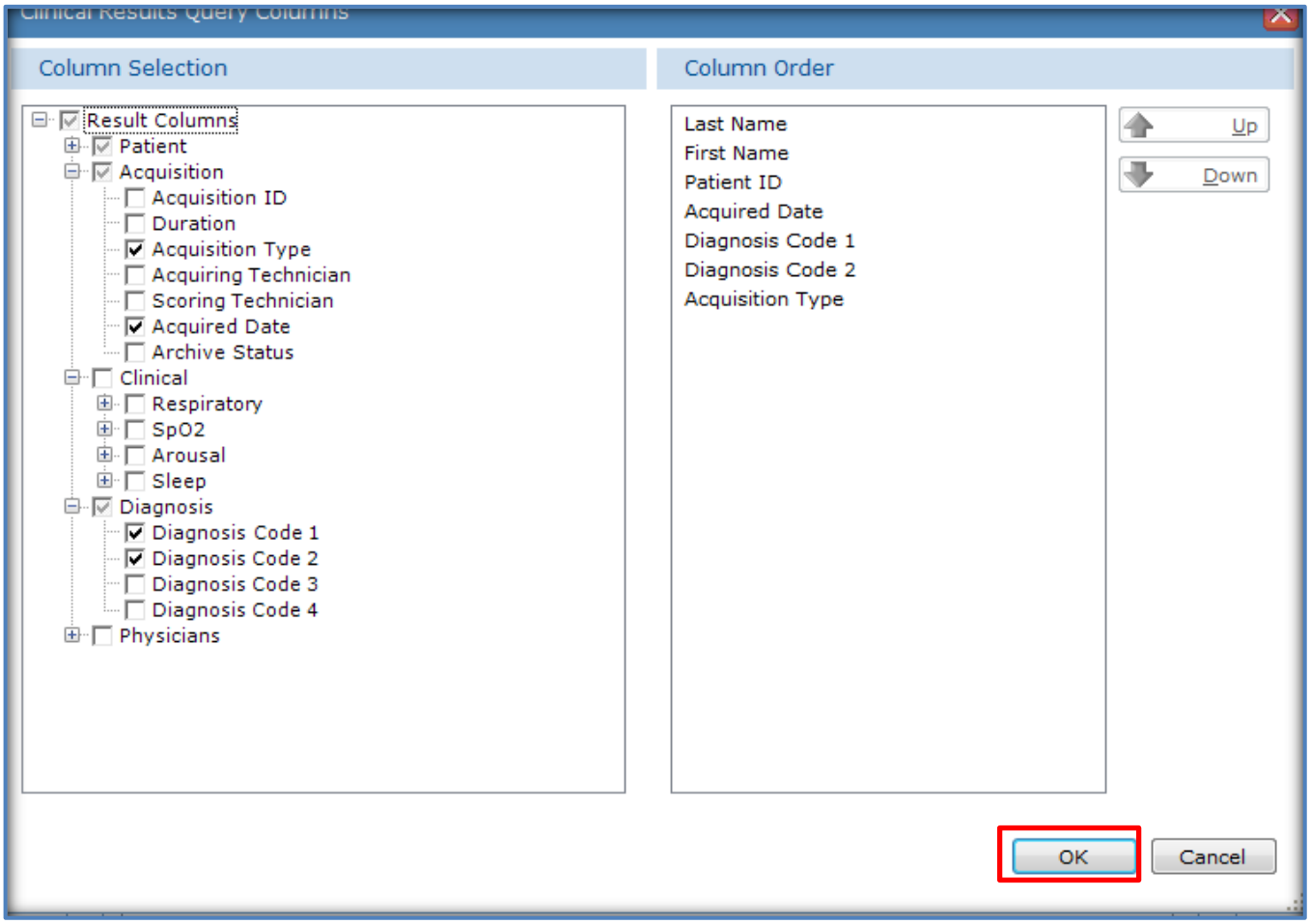


3. **Next, give a Query Name and Query Description, and then define the parameters of your query.**

   Click the Result Columns button in the bottom left corner.

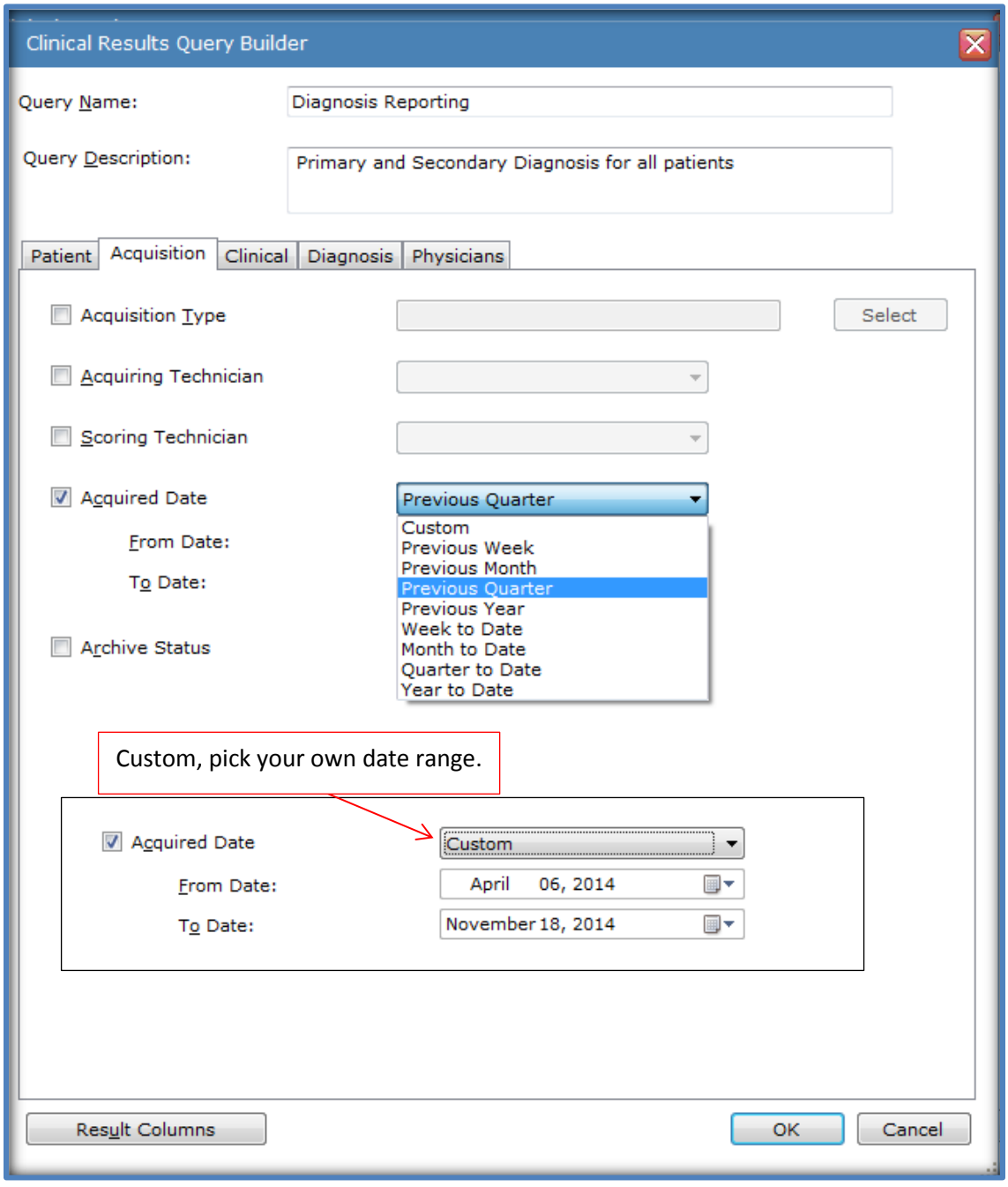


4. **Select the parameters from the list you would like to see on the report. Click the (+) for each parameter category to see subcategories. ☑ Select the applicable data columns to include in the query results. Once your selection is made, the parameter you selected will be added to the "Column Order" pane. You can reorder the parameters in the Column Order list by selecting a parameter, and then clicking the Up and Down buttons to reposition the parameter in the list. This is also how they will appear from left to right on the .CSV report. Once you have made your selections, click OK.**

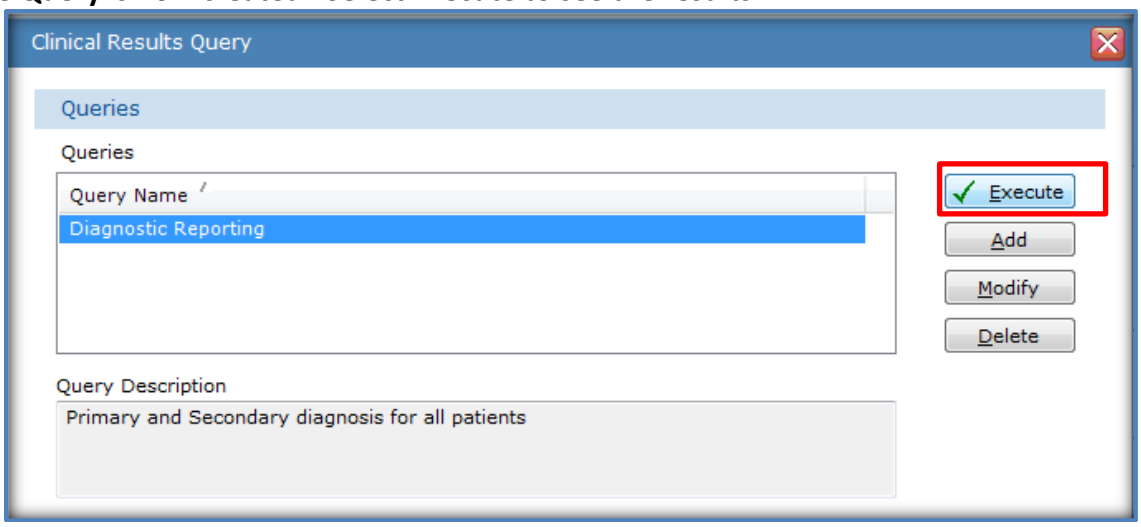


5. **You can also select the time period for which you would like to see results. You can choose to run this report weekly, monthly, quarterly, etc. or you can select a "custom" date range.**

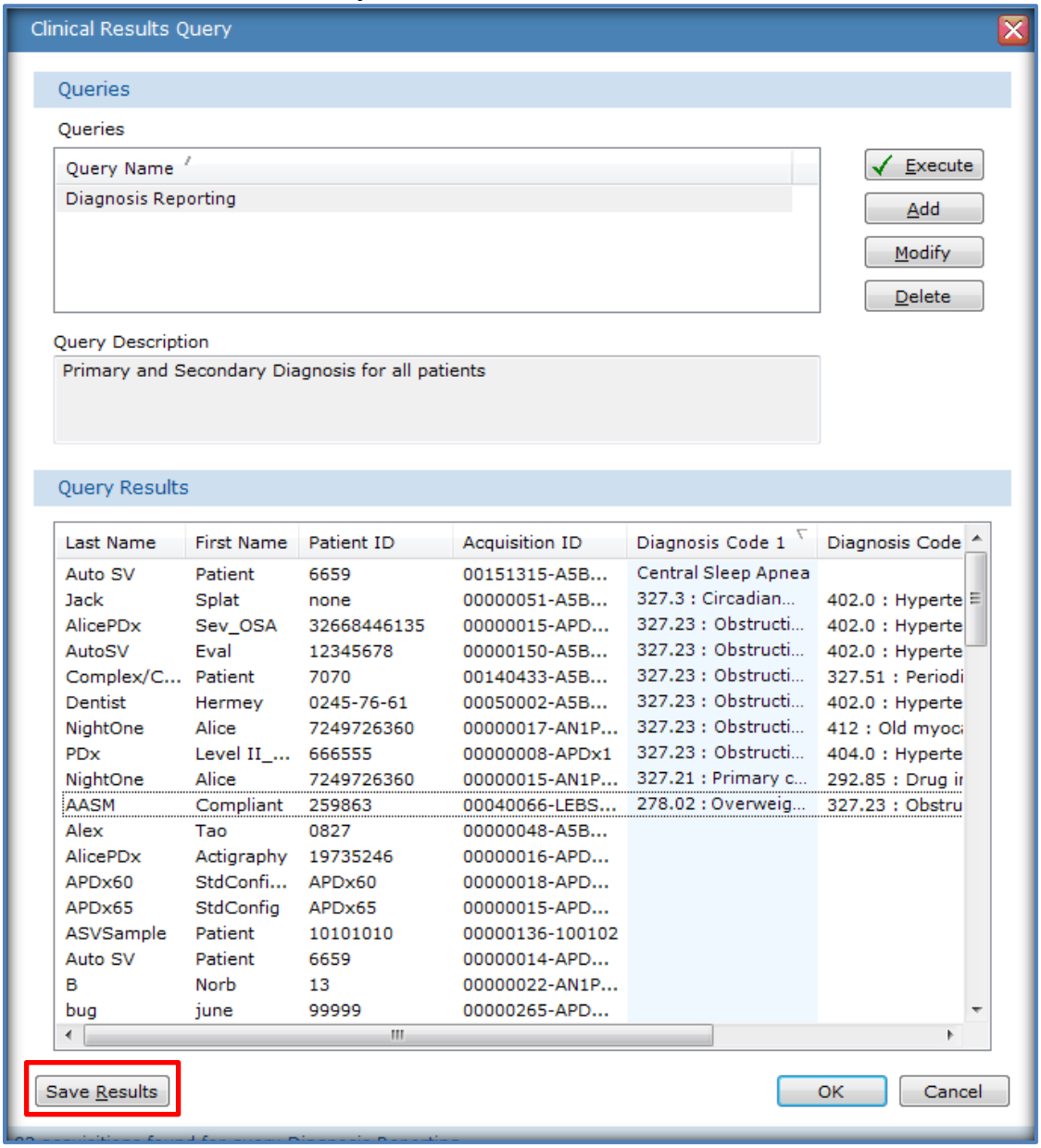
   To specify a date range, place a ☑ check mark in the Acquired Date area and select an option from the dropdown list, or select Custom to choose specific dates. Once selected, click OK.



6. **The Query is now created. Select Execute to see the results.**



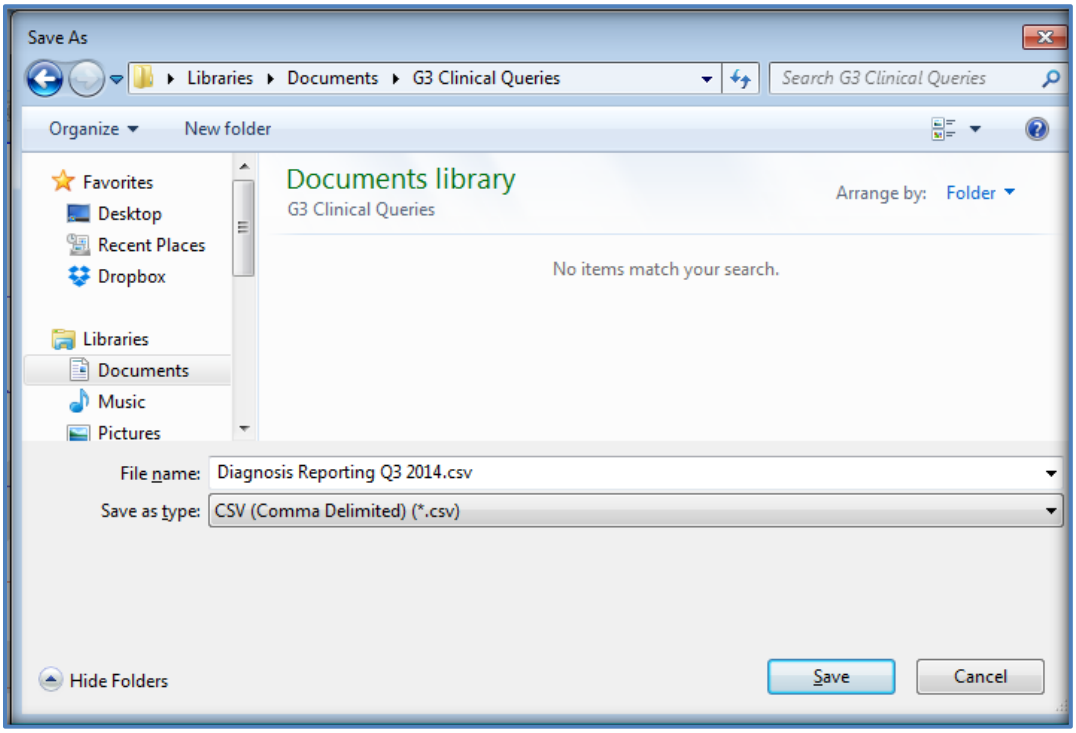
7. **The results will show in the Query Results area. Click Save Results to save as a .CSV file.**



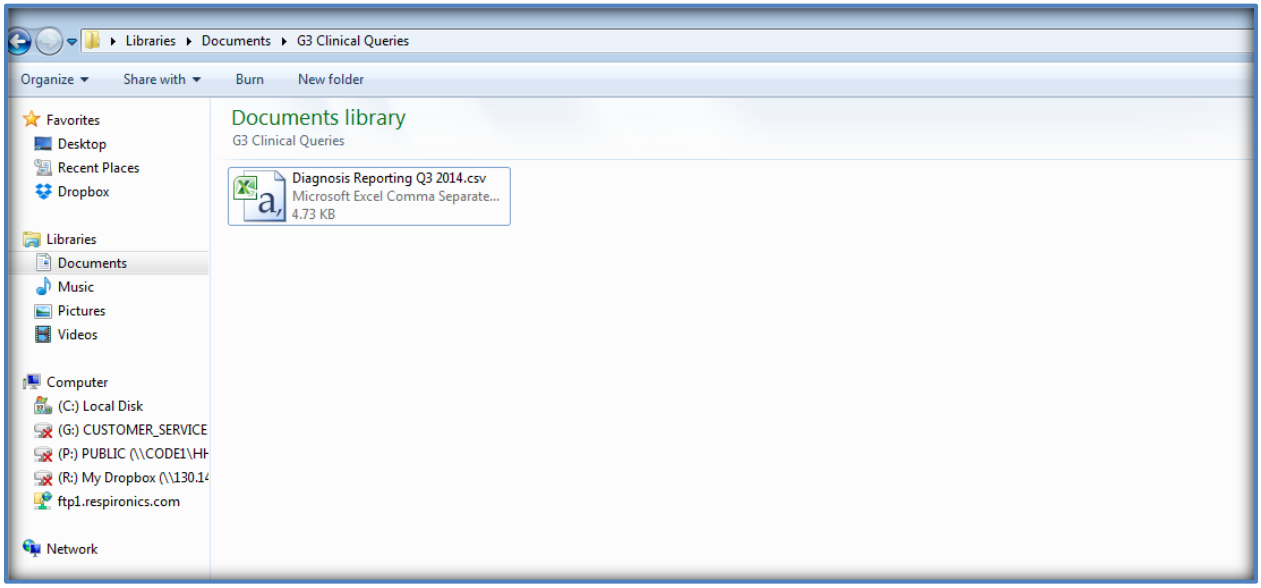
** Note*: Screenshots are from the Sleepware G3 Software.

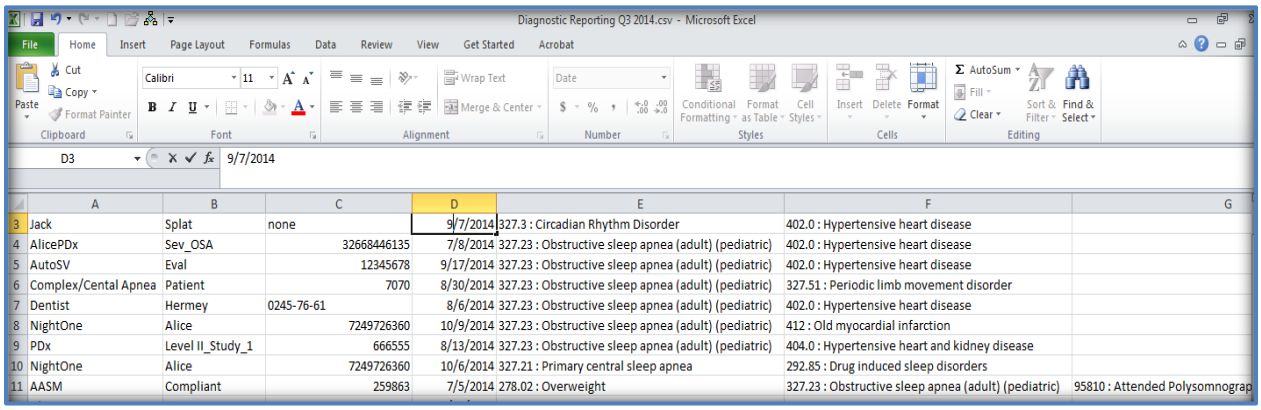
** Disclaimer*: Screenshots may change based on software version.

8. **The report will save with the Query Name, "Diagnosis Reporting". In this example "Q3 2014" was added to the name since it was selected above to include "Previous Quarter Results". The file will be saved to a Folder that was created called "G3 Clinical Queries".**



9. **The query, "Diagnosis Reporting Q3 2014," will be saved in the selected folder. To open it and view the results, double left-click on the file to open it.**

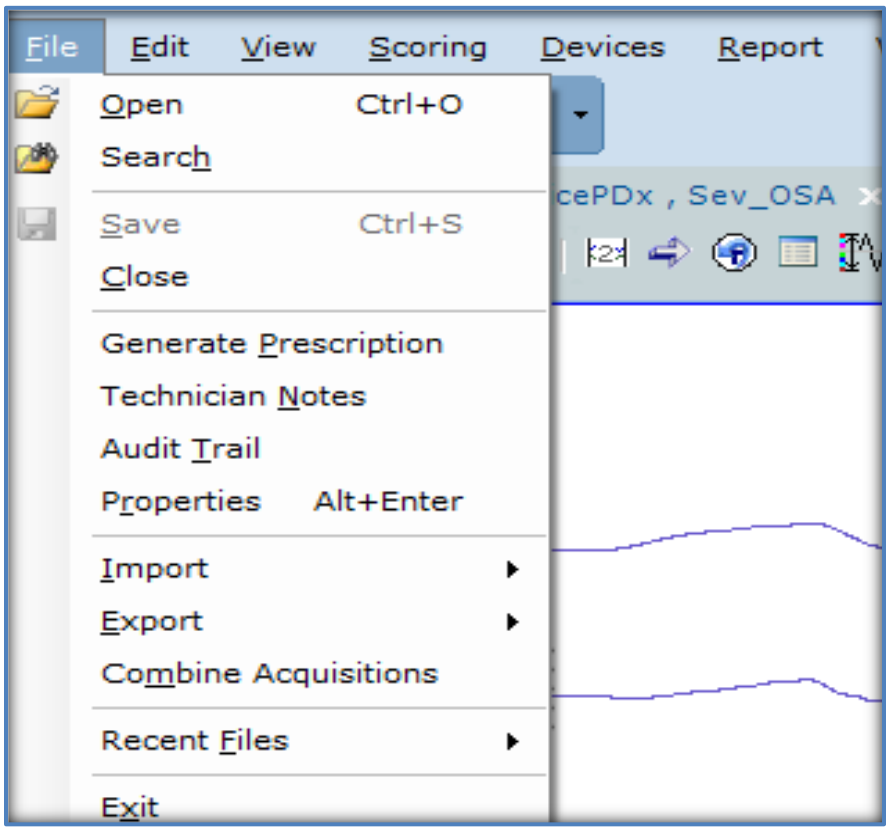




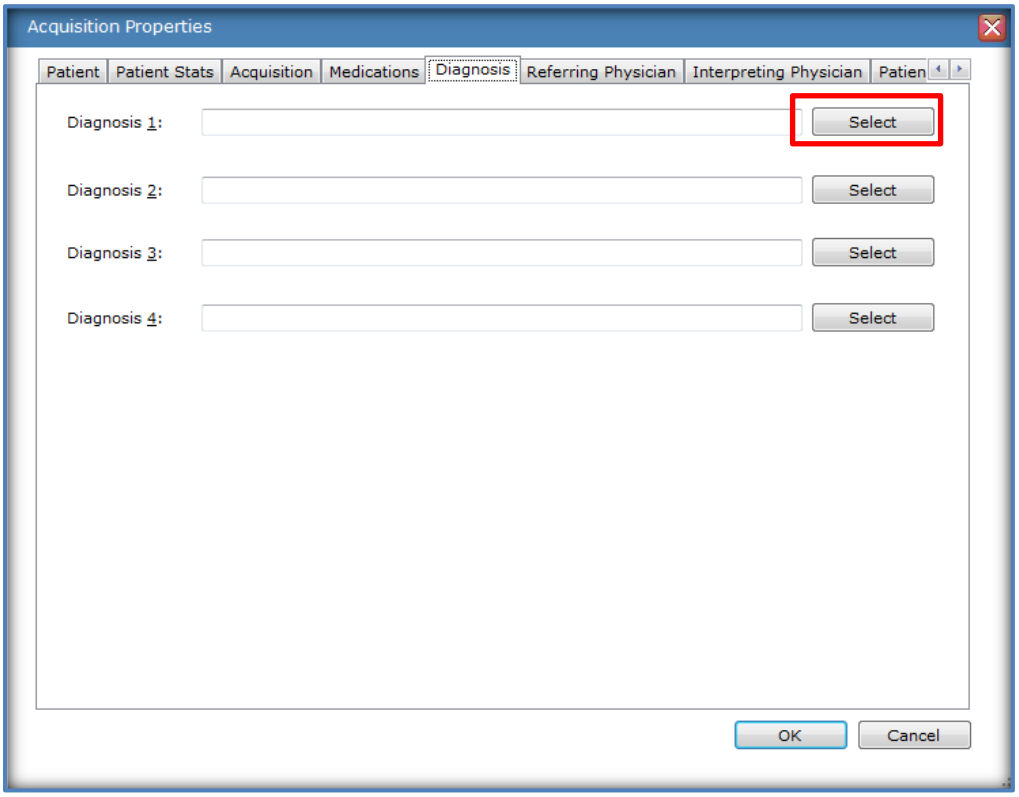
	A	B	C	D	E	F	G
3	Jack	Splat	none	9/7/2014	327.3 : Circadian Rhythm Disorder	402.0 : Hypertensive heart disease	
4	AlicePDx	Sev_OSA	32668446135	7/8/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	402.0 : Hypertensive heart disease	
5	AutoSV	Eval	12345678	9/17/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	402.0 : Hypertensive heart disease	
6	Complex/Cental Apnea	Patient	7070	8/30/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	327.51 : Periodic limb movement disorder	
7	Dentist	Hermey	0245-76-61	8/6/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	402.0 : Hypertensive heart disease	
8	NightOne	Alice	7249726360	10/9/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	412 : Old myocardial infarction	
9	PDx	Level II_Study_1	666555	8/13/2014	327.23 : Obstructive sleep apnea (adult) (pediatric)	404.0 : Hypertensive heart and kidney disease	
10	NightOne	Alice	7249726360	10/6/2014	327.21 : Primary central sleep apnea	292.85 : Drug induced sleep disorders	
11	AASM	Compliant	259863	7/5/2014	278.02 : Overweight	327.23 : Obstructive sleep apnea (adult) (pediatric)	95810 : Attended Polysomnograp

*** If patients appear on the list without a diagnosis, you can return to the patient's record to add this information. Follow the steps below to do this.**

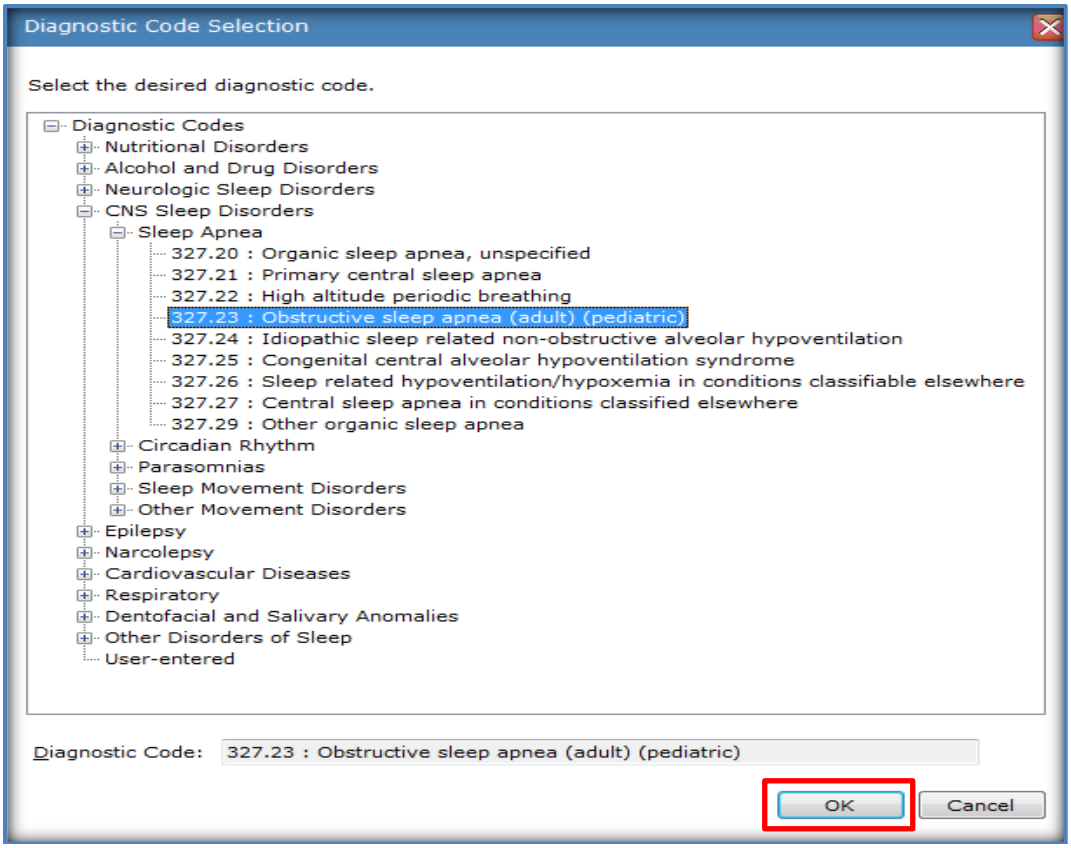
1. **Open the patient record and select File > Properties.**



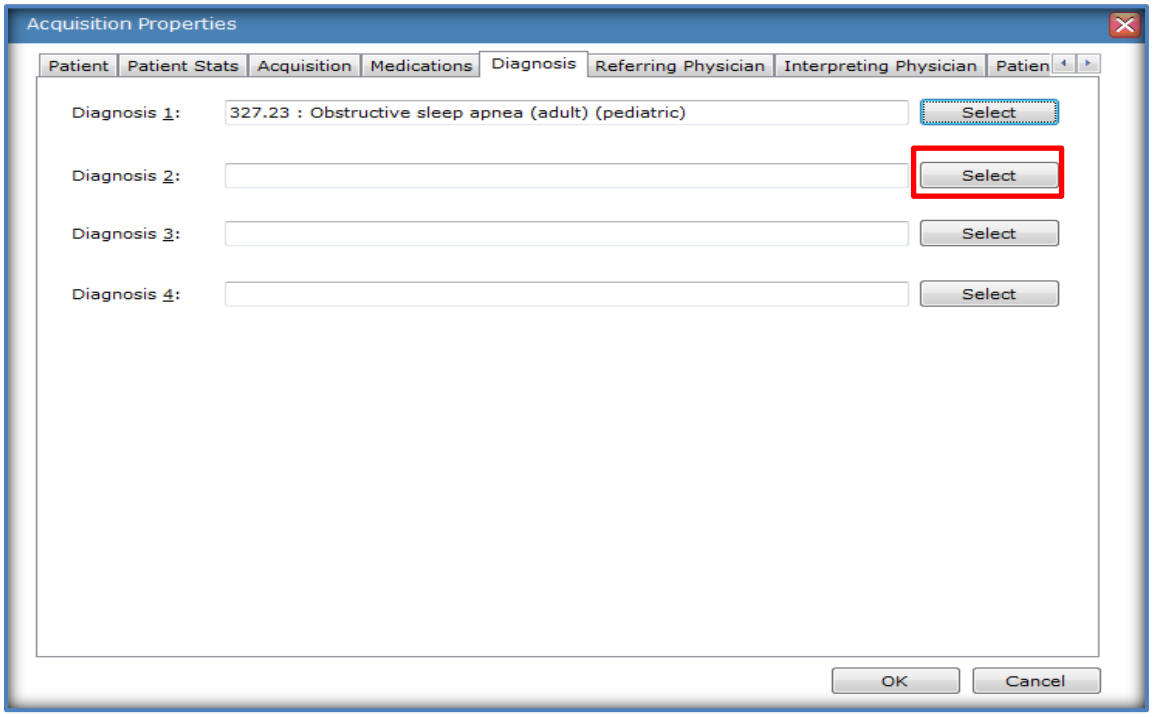
2. **Select the Diagnosis Tab. Click on Select for Diagnosis 1.**

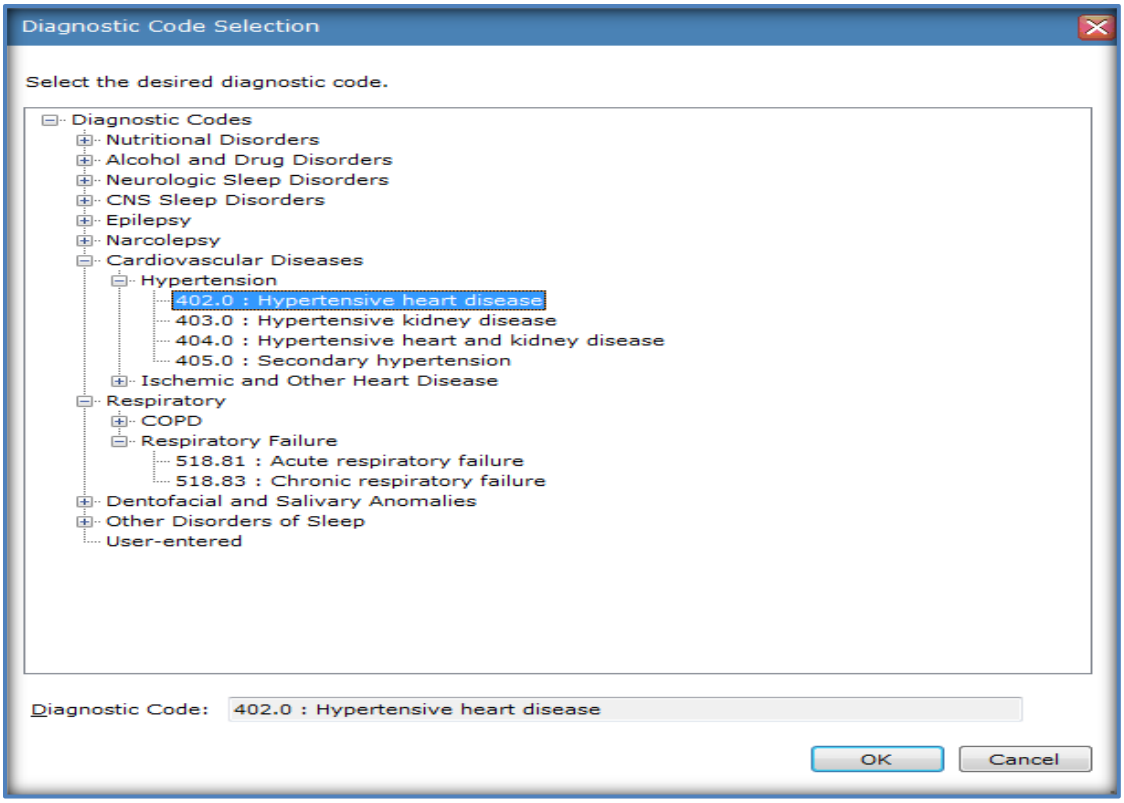


3. **Click the (+) sign in front of the diagnosis category of choice to see the subcategory and diagnosis types and codes. Select the appropriate diagnosis for Diagnosis 1. Select OK.**

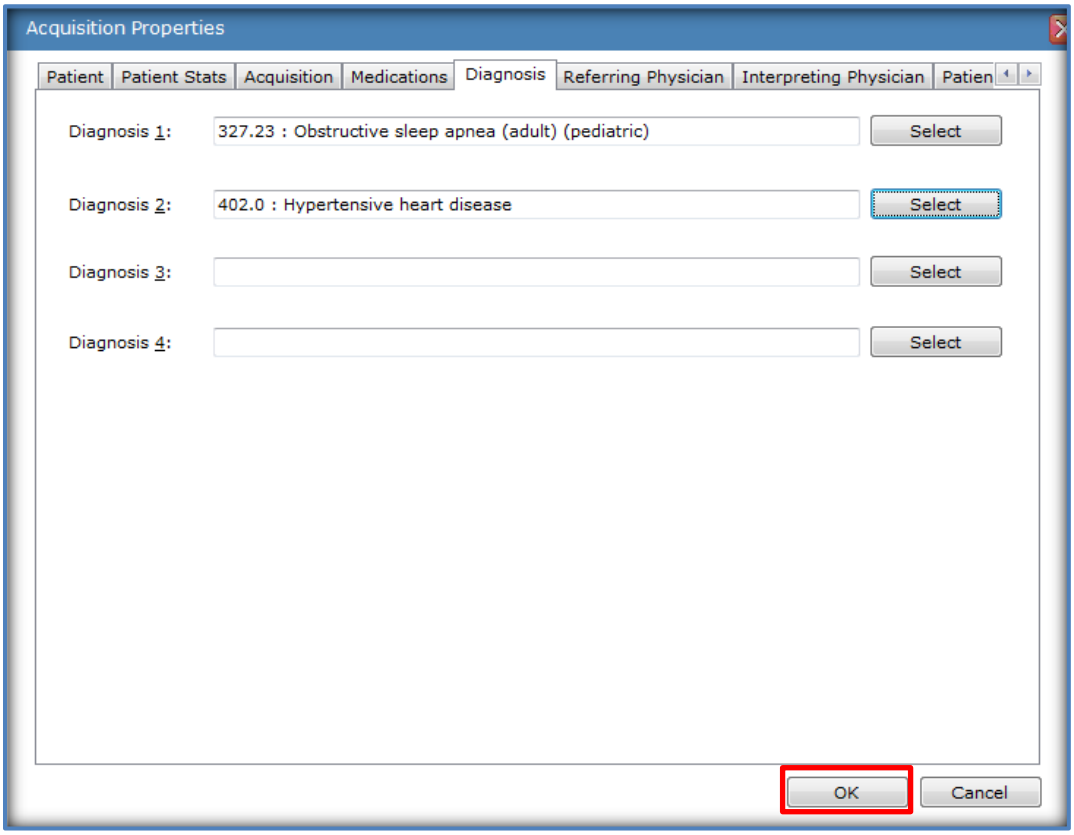


4. Repeat the above step for Diagnosis 2.




Diagnostic Code Selection
Select the desired diagnostic code.
Diagnostic Codes
Nutritional Disorders
Alcohol and Drug Disorders
Neurologic Sleep Disorders
CNS Sleep Disorders
Epilepsy
Narcolepsy
Cardiovascular Diseases
Hypertension
402.0 : Hypertensive heart disease
403.0 : Hypertensive kidney disease
404.0 : Hypertensive heart and kidney disease
405.0 : Secondary hypertension
Ischemic and Other Heart Disease
Respiratory
COPD
Respiratory Failure
518.81 : Acute respiratory failure
518.83 : Chronic respiratory failure
Dentofacial and Salivary Anomalies
Other Disorders of Sleep
User-entered
Diagnostic Code:
402.0 : Hypertensive heart disease
OK
Cancel

5. **Now that the primary and secondary diagnoses are selected, click OK. You can close the study for this patient.**



Sleepware G3 with Somnolyzer

Workflow and Data Management with Sleepware G3

innovation you

PHILIPS

Objectives

Data Management and Workflow with Sleepware G3

- Working folders

  Local C Drive Folder C:\Acquisitions (Integration location)

  Auto-Copy (Back-up or Network) Study Locations

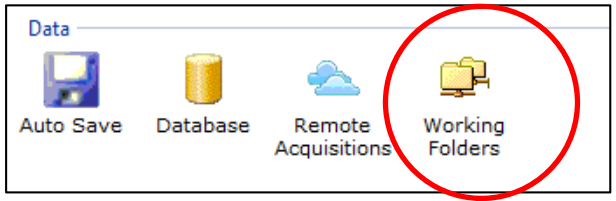
  Accessing studies for scoring

  Archiving studies using Acquisition File Management

  Keeping your hard drive manageable

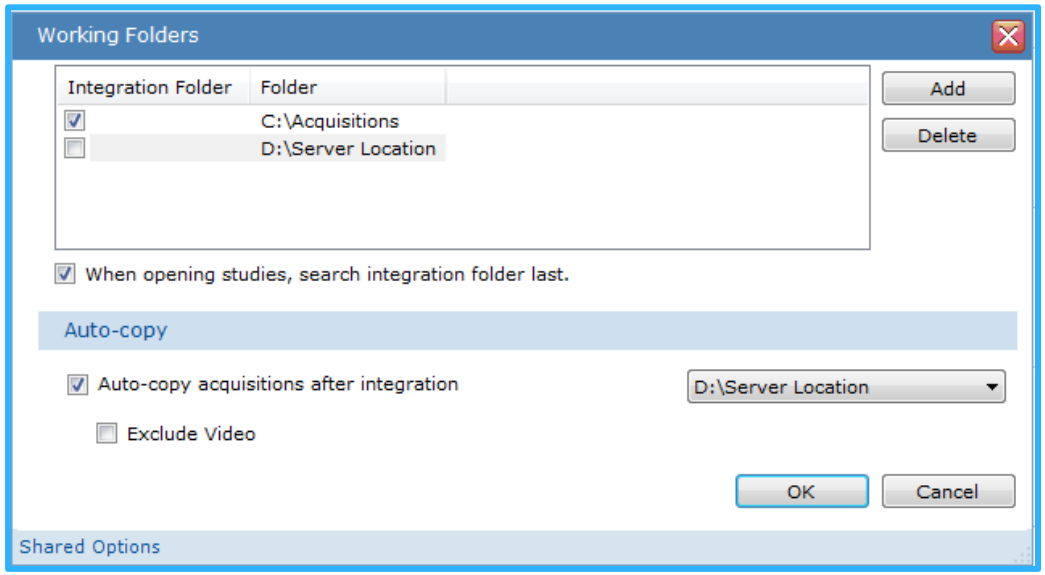
PHILIPS

Working Folders



By default, upon installation, Sleepware G3 designates a folder on each ***acquiring*** PC as the integration folder. This is set up as: **C:\Acquisitions**

A working folder is a folder where studies are held after collection either for temporary storage, scoring, or permanent storage. Typically, a sleep lab will working folders set up so that studies collect to the local machine, and then automatically back up to a server location. The server location is where studies will be accessed for scoring and review. Once a study is scored and reviewed, it is then moved to the permanent scoring location.

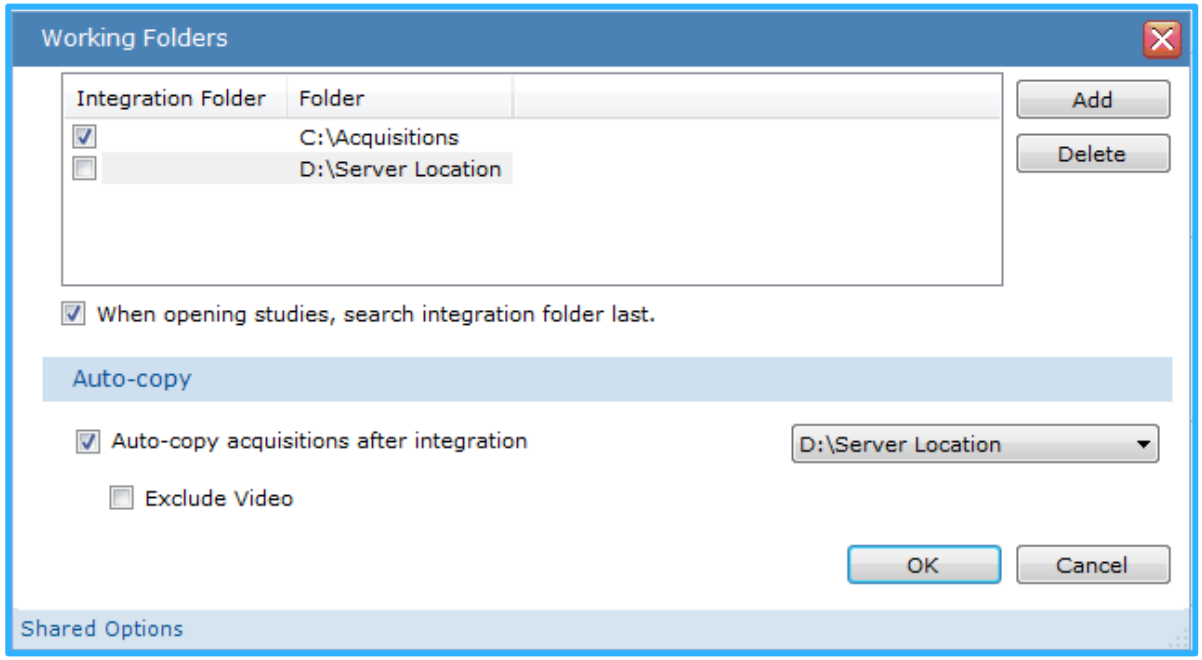


**The local folder (C:\Acquisitions) is more of a safety measure for collection, in cases where the server may be offline or unavailable during a study. Studies can, and should be deleted from the local location once the user verifies the study is in the backup location for scoring.

PHILIPS

Working folder: Auto-Copy or Server Location

Creating an auto-copy location allows all studies from all rooms in the sleep lab to back up to a single folder location on the network. The auto-copy location is typically a server location on the sleep lab network that all acquiring PCs can access. This will be the location that the scorers will access for scoring and physicians will access for review.



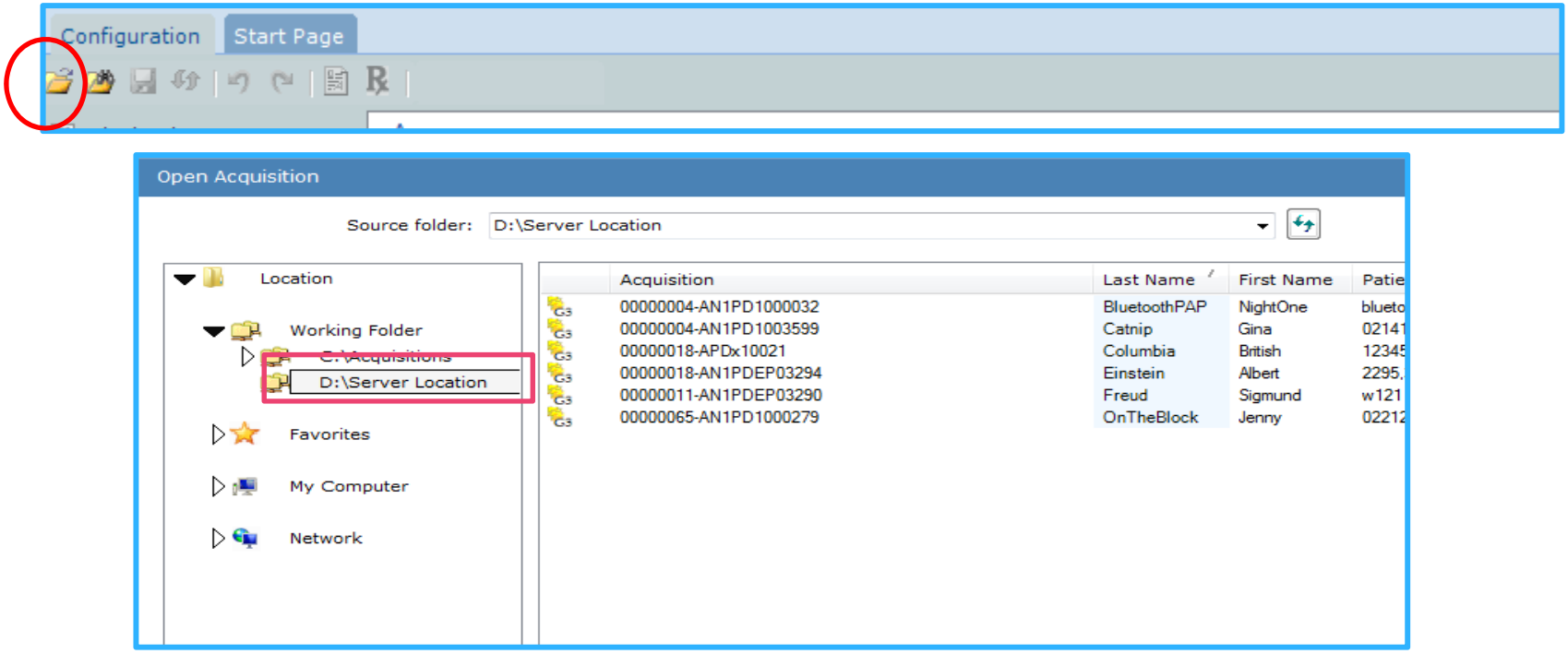
Therefore, when each study has ended, it will integrate to the local folder on the acquiring PC and then automatically back up to the 'auto-copy' location in which you choose. You can think of the C:\Acquisitions folder as a failsafe for retrieving the study in cases where the auto-copy or network location may be offline

The studies in C:\Acquisitions are copies that will not be scored and can be deleted from this folder periodically to save hard drive space.

PHILIPS

Searching for Acquisitions

The yellow folder icon located in the upper-left toolbar is for opening acquisitions. Single left-click on the folder to see the 'open acquisition' window. To score a study or review a scored study, access the auto-copy folder located on the left pane, named D:\Server Location in this example. When this folder is highlighted, the studies in this folder will appear in the right pane. Double left-click on the study you want to open.

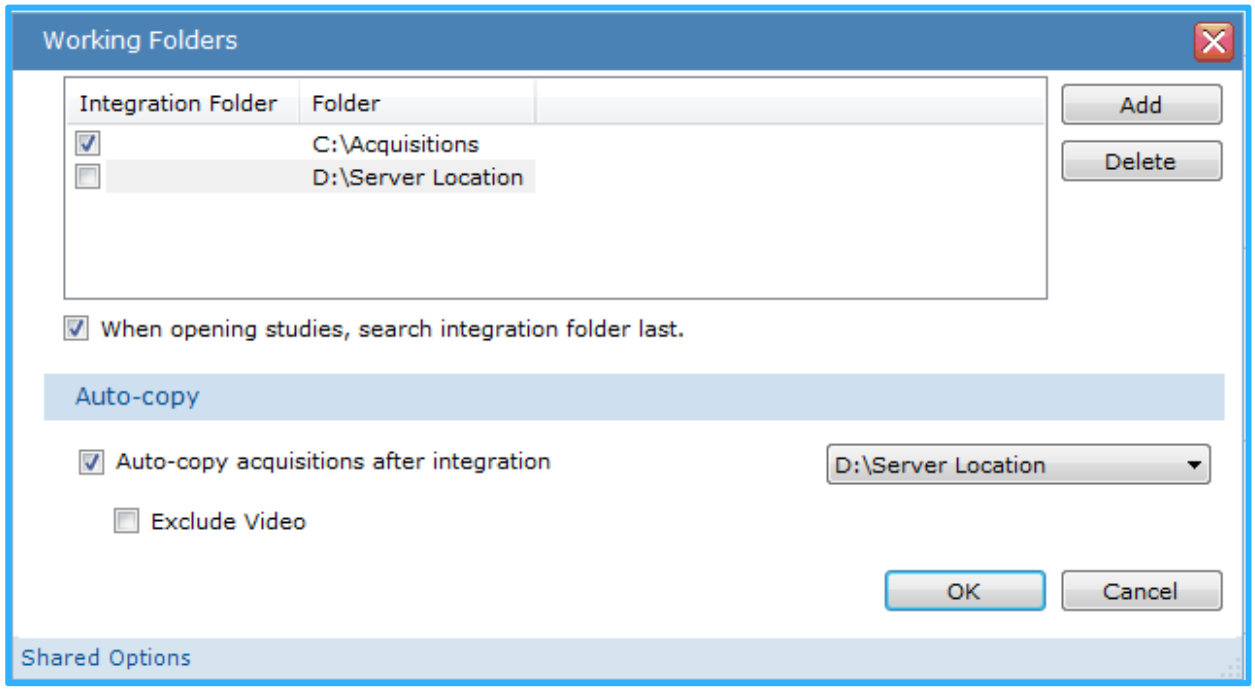


Note: If you are using 'user assignment', studies assigned to an individual user will always appear on the start page on the "My Acquisitions" list.

PHILIPS

Working folders, additional settings

Video is collected during the study and integrated to the local acquisition folder with the sleep study data files. By default, the video is also sent to the auto-copy location. If you do not want video to transfer to the auto-copy location, you can choose to exclude video by placing a check mark in the Exclude Video box.



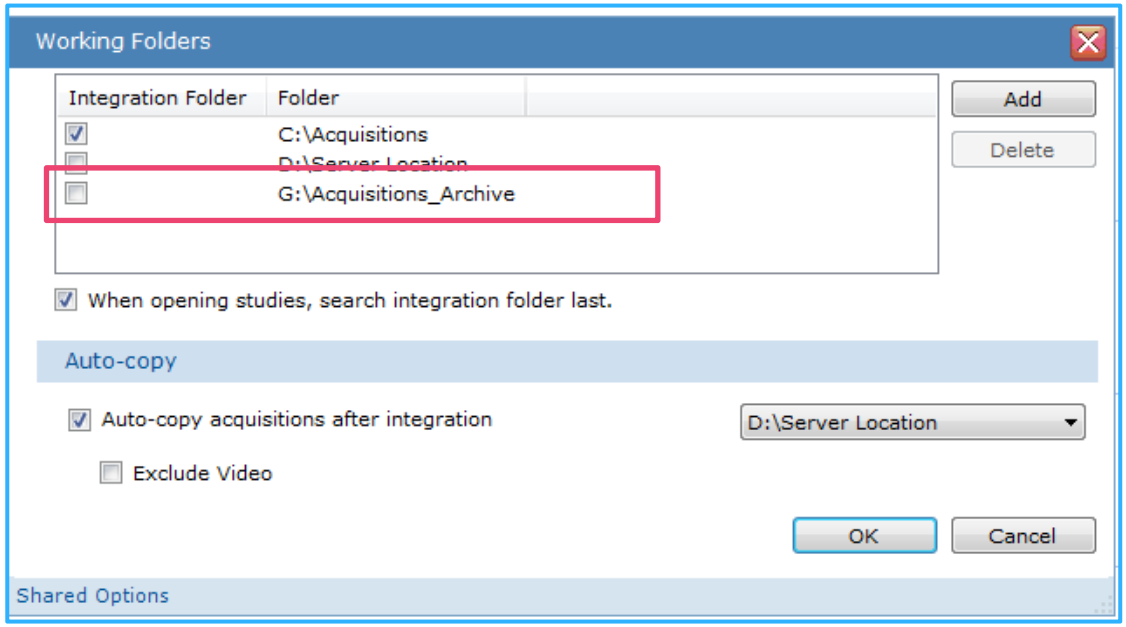
If you've set up the working folders so that studies integrate to C:\Acquisitions and then back up to the auto-copy location, ensure that there is a check mark placed in front of "When opening studies, search integration folder last", so that Sleepware G3 will open the study from the auto-copy (server) location for scoring and review.

PHILIPS

Creating a permanent storage or archive folder location

When considering a permanent storage place for studies, some labs decide to use a location other than the auto-copy or server location (such as a large capacity external hard drive). If your lab chooses to have a separate location for storage, this storage location can be added as a working folder for easy transfer by accessing the File Management area in the Tools menu. The next few slides will demonstrate this action.

**It is strongly recommended to create a permanent storage location, rather than using the backup /scoring location for storage. Moving studies from the backup location to a permanent storage location will reduce the number of studies you must search through for scoring and will prevent the network from slowing down due to too many studies included during searches.

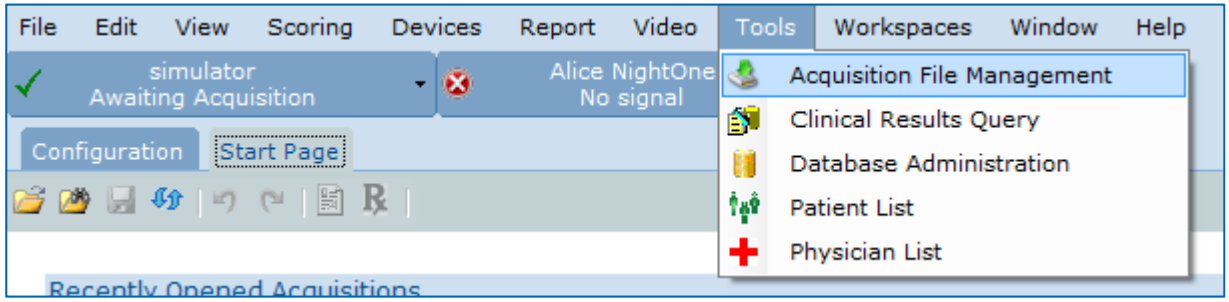


PHILIPS

Transferring Study Data to the Archive Location

To transfer a study from the auto-copy/backup location to a permanent storage or archive location, select Tools from the main menu of Sleepware G3 and Acquisition File Management from the dropdown menu.

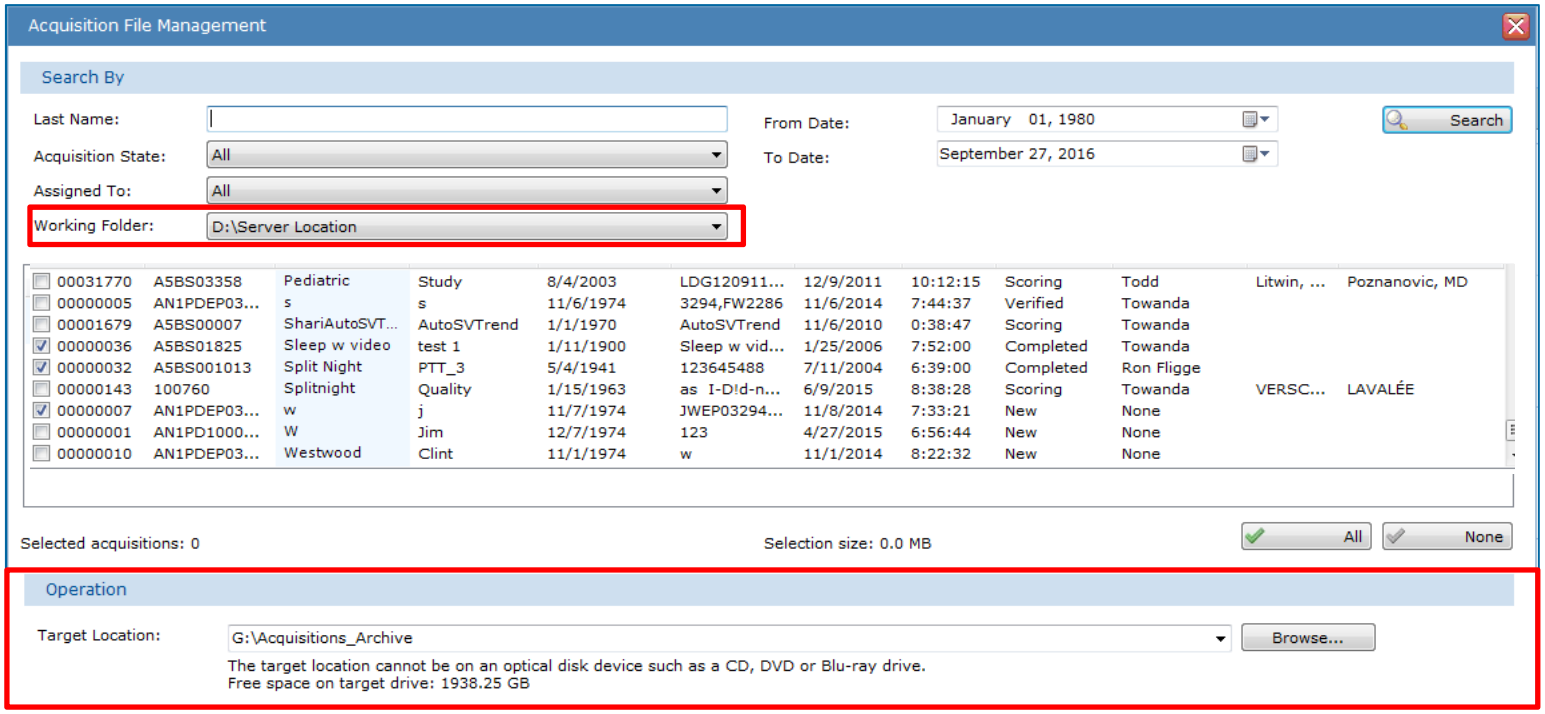
Tools > Acquisition File Management



PHILIPS

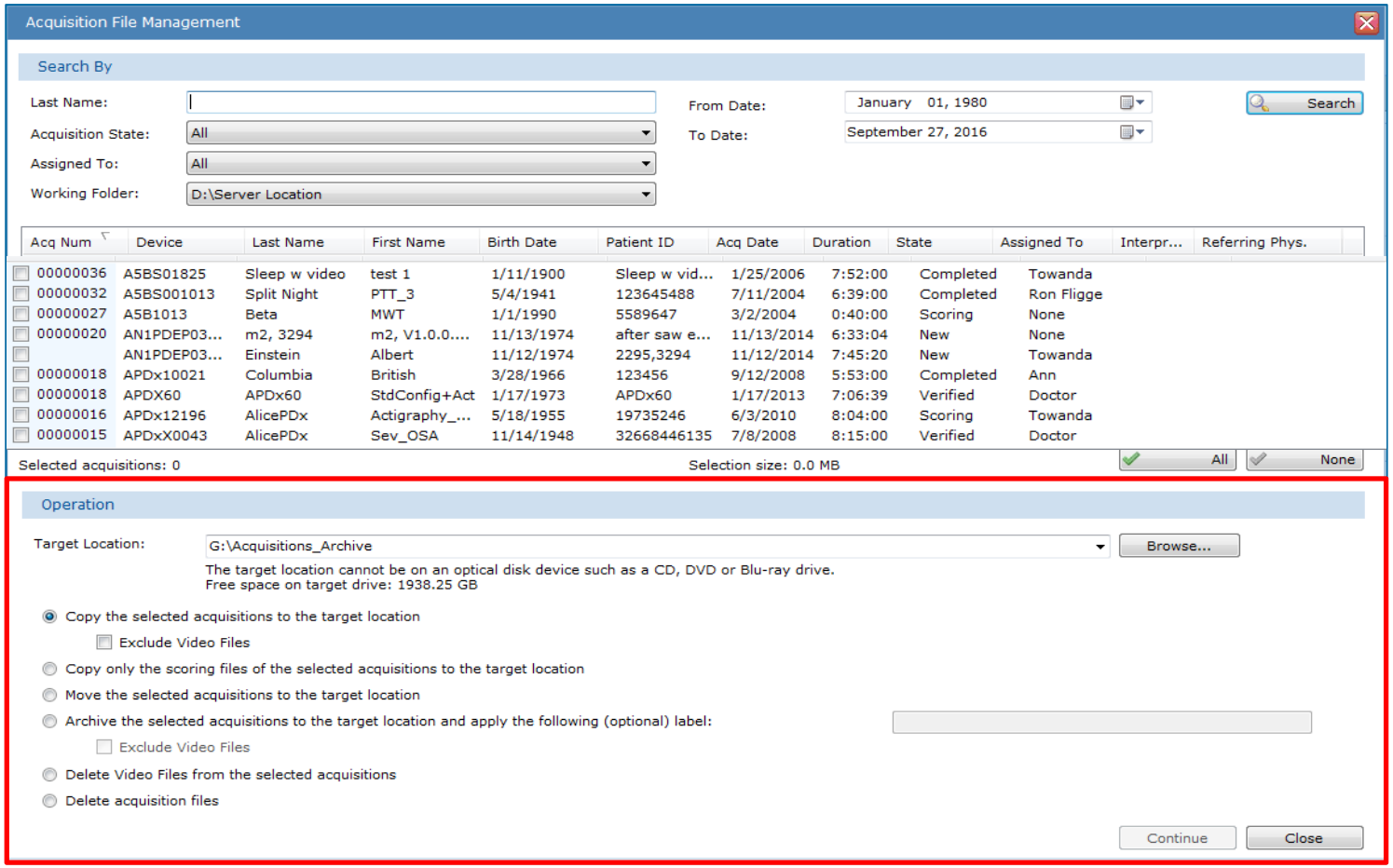
Transferring Study Data to the Archive Location

To begin the transfer, select your auto-copy folder location as the Working Folder. Next, place a check mark in the box in front of the acquisition you would like to transfer. Next, in the Operation section, choose your permanent storage or archive working folder as the Target Location. If you have this location set up as a Working folder, it will appear on the dropdown list. If you do not, then you can Browse to the location. In this case, G:\Acquisitions_Archive.



PHILIPS

Transferring Study Data to the Permanent Storage/Archive Location

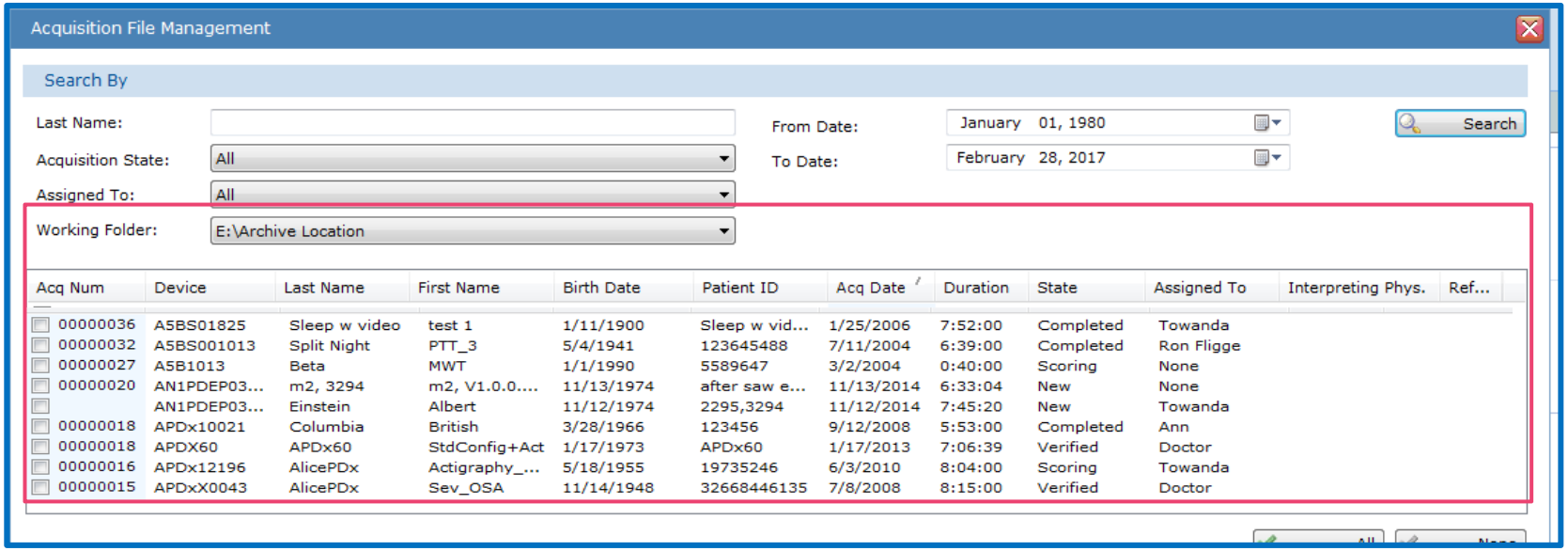


Notice in the Operations area options to copy, move, or archive a studies. Typically, you will select the first option: "Copy the selected acquisitions to the target location" and include video. If this method is chosen, the study will be copied and then reside in both locations: the backup location and the archive location. It is recommended that once it is verified the study is copied to the storage location, you should delete the study from the backup location. These steps will be shown in the next few slides.

PHILIPS

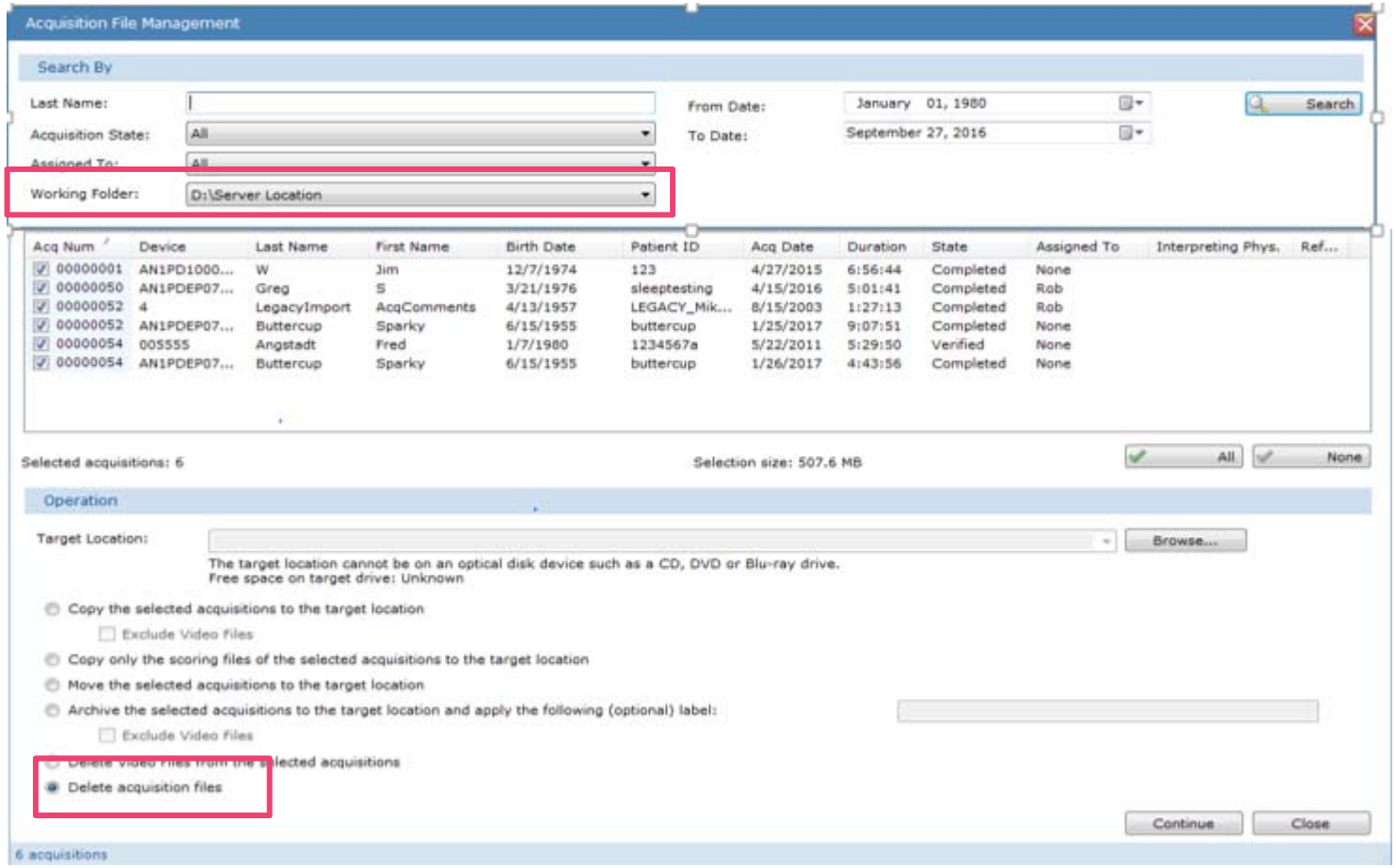
Verifying Archive Location

To verify studies have been copied to the permanent storage location, select this location as your Working Folder location to see the studies populate.



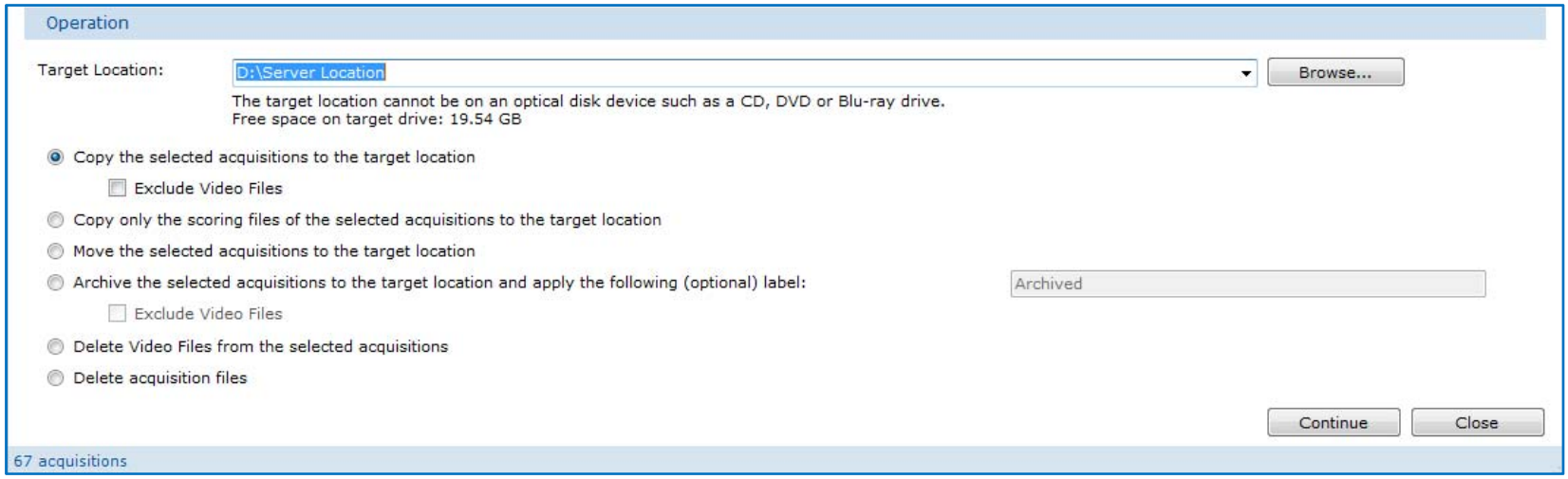
PHILIPS

Now that you've verified the transfer, you can delete the files from the auto backup/server location. In this example, this location is: D:\Server Location



PHILIPS

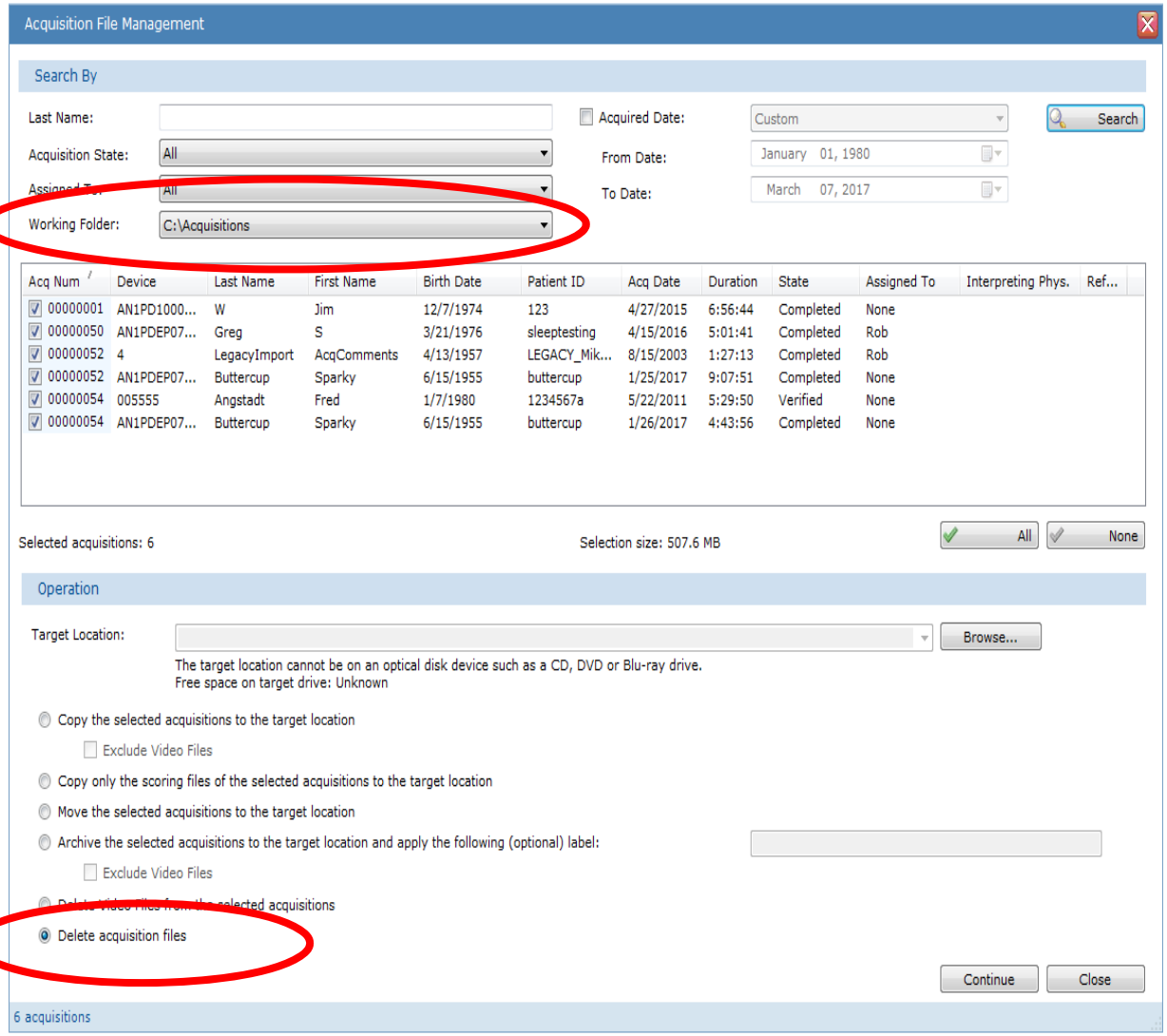
Operations options for transferring studies explained: Copy, move, archive and delete.



1. Copy the selected acquisitions to the target location: Puts a copy of the selected acquisitions in the target location and does not delete the original files. You can also choose to “Exclude Video Files” associated with the acquisition.
2. Copy only the scoring files of the selected acquisitions to the target location: Copies only the scoring files associated with the selected acquisitions, not the acquisition files.
3. Move the selected acquisitions to the target location: Copies the selected acquisition files to the target location then deletes the originals after the copy.
4. Archive the selected acquisitions to the target location and apply the following (optional) label: Copies the selected acquisition files to the target location, then deletes the originals after the copy. This function also adds a user-specified archive label and computer-generated archive date to that acquisition's record in the database. By default, an acquisition that has an archive label and date in the database does not appear when searching for acquisitions. You can also choose to “Exclude Video Files” associated with the acquisition.
5. Delete video files from the selected acquisitions: This option allows you to delete multiple video files at once.
6. Delete acquisition files: This option deletes all of the associated acquisition files for the selected acquisition. The entry in the database for the acquisitions remains and is not removed as part of the delete operation.

PHILIPS

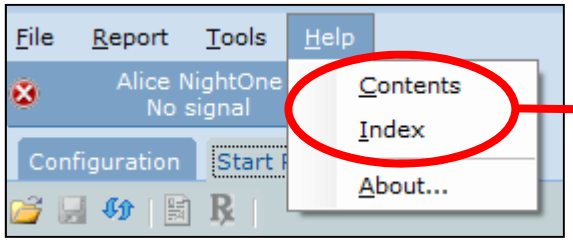
Last, it is important to manage the hard drive on each of your acquiring workstations. The folder location is C:\Acquisitons. The studies can be deleted by accessing the File Management tool. Select the C:\Acquisitons folder as the working folder. Select the studies that you'd like to delete. Next, select Delete Acquisition Files at the bottom of the page, and click on Continue to proceed.

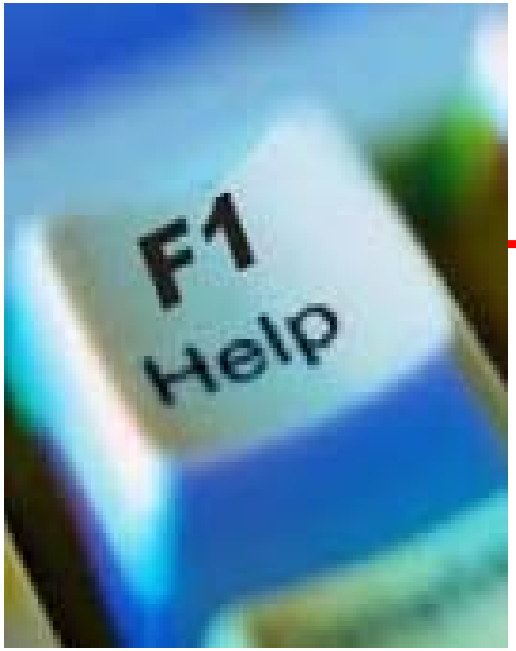


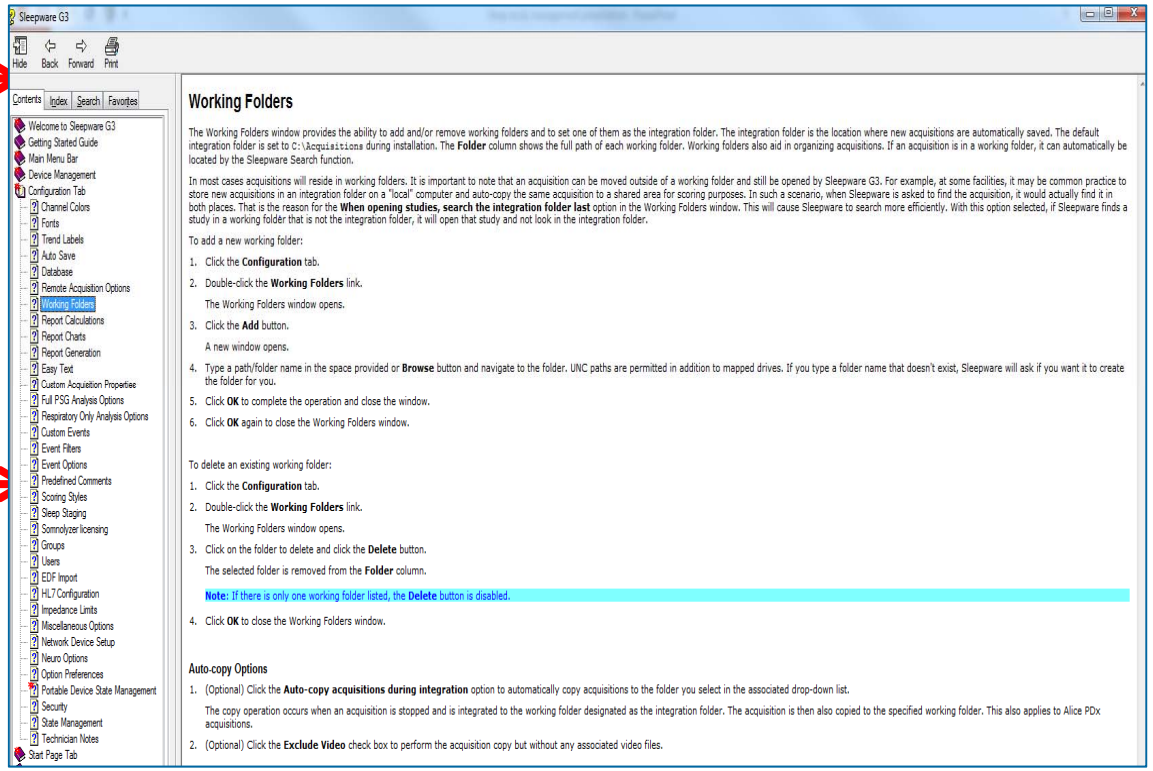
PHILIPS

Help!

For more information about Sleepware G3 , you can access the online Help by selecting **Help** from the main menu and then **Contents** or **Index**. ***OR…*** press **F1** on your computer's keyboard to view the online Help.







PHILIPS

Thank You

Note: Screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Disclaimer: Screenshots may change based on software version.

Consult Sleepware G3's online help for additional information.

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RPM 5/31/2017

Sleepware G3 with Somnolyzer

Workflow efficiencies using
User Management, State Management
and the Location field

innovation + you

PHILIPS

Benefits of User, State, and Location Management

- Location fields can be used to set up multiple geographic locations or user locations for your lab. Locations can facilitate user location and sleep study data partitioning per geographic area. With use of the location field, it is possible to assign patients to a specific location who can only be seen by users with that same location.

- Adding and managing users to Sleepware G3 allows individual user login, user customized work preferences, and the ability for 'patient assignment' to various users, such as a scoring tech or interpreting physician, as the patient goes through the testing cycle from acquisition to complete.

- Sleepware G3 users can be assigned to one or more locations.

- State management allows a user to assign a status to a sleep study for tracking progress through sleep study process, such as Newly Acquired, Scoring, Scored, Interpreting, Interpreted or Complete.

PHILIPS

Objectives

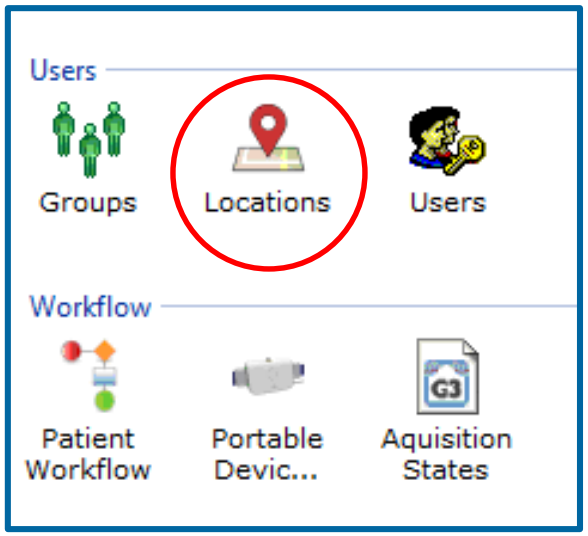
- How to configure Sleepware G3 for locations, user management and state management.
- How to assign a location to a user.
- How to assign a location to a patient.
- How to enable and utilize User Management in Sleepware G3.
- How to enable and utilize State Management in Sleepware G3.

PHILIPS

Workflow Efficiency
Part 1.
Location Management

PHILIPS

Workflow Efficiencies
Locations



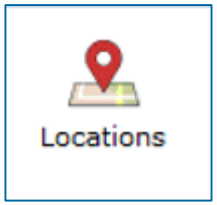
Configuration > Locations

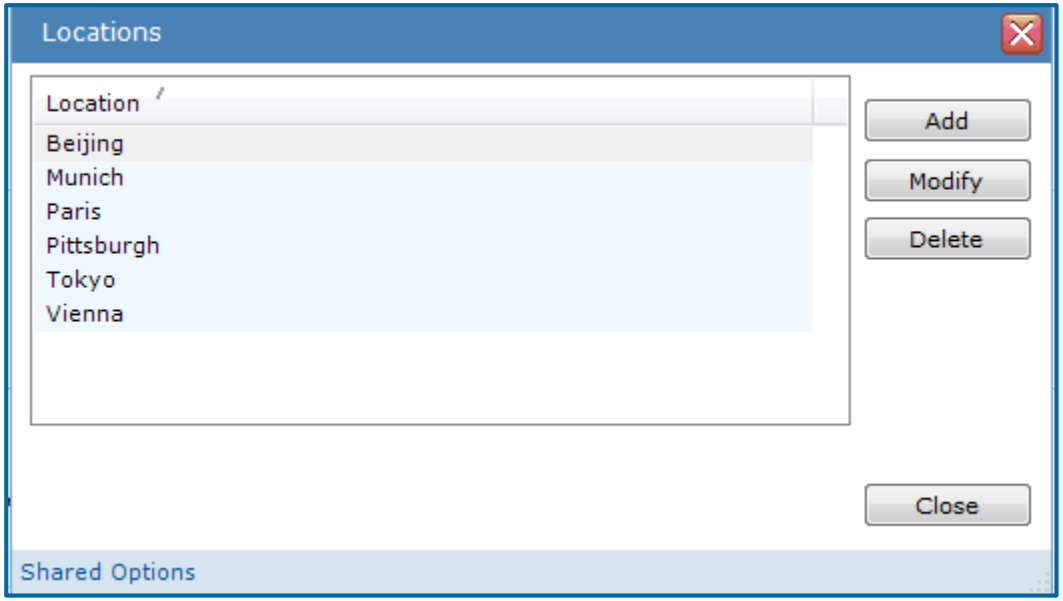
Locations can represent geographical locations or places, or they can represent physicians. Locations are used to facilitate patient privacy and data partitioning. Because of the location assignment, patients from a specific location can only be seen by Sleepware G3 users associated with that same location. This helps ensure that physicians or sleep labs can only see their own patients and not see patients of other physicians or sleep labs.

To add locations, double left-click on the Locations icon.

PHILIPS

Add Locations





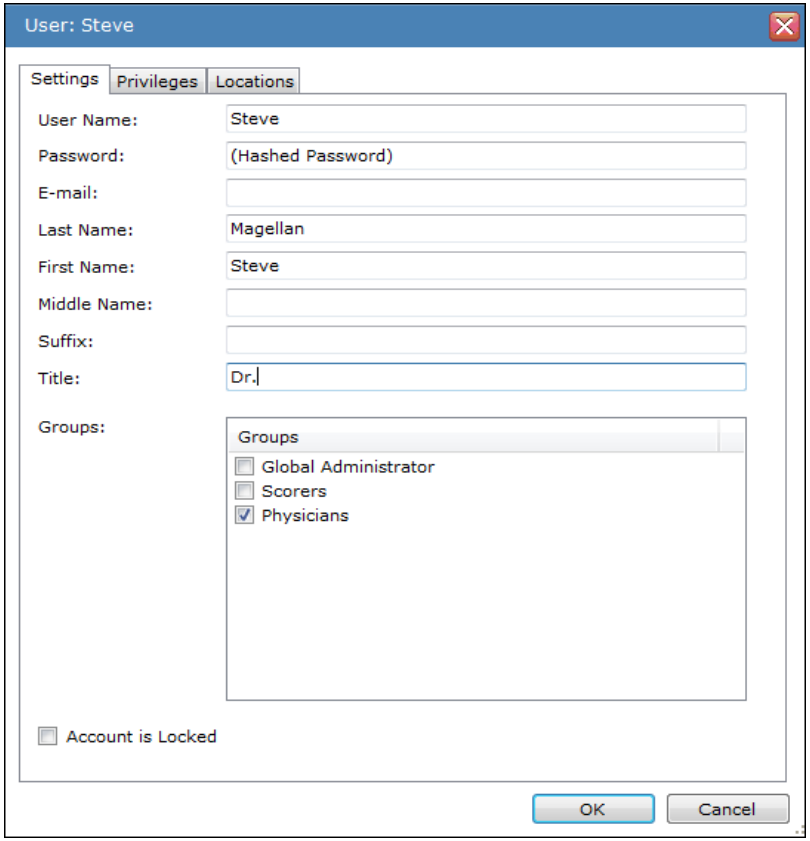
Location names can be edited using Modify, even after they are assigned to a user or Patient. The user profile or patient info will automatically update to reflect the change.

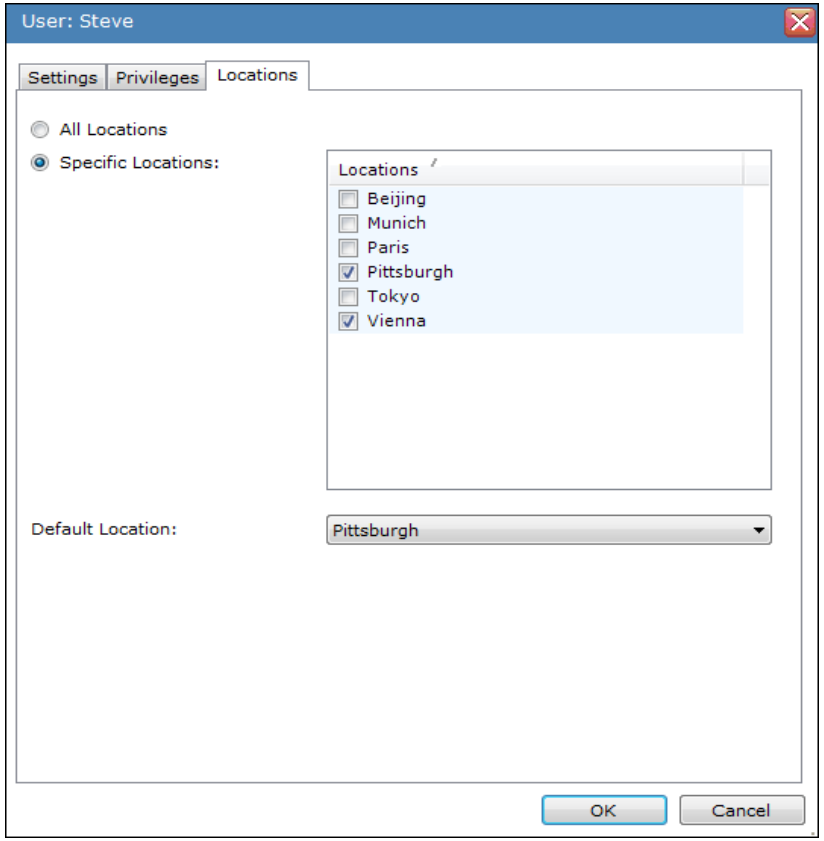
A location cannot be deleted if patients are assigned to it or if a user not in the Global Administrator group has it in his or her list of locations.

The ability to configure locations shall only be available when user management is enabled.

PHILIPS

Assigning Locations to a Sleepware G3 user

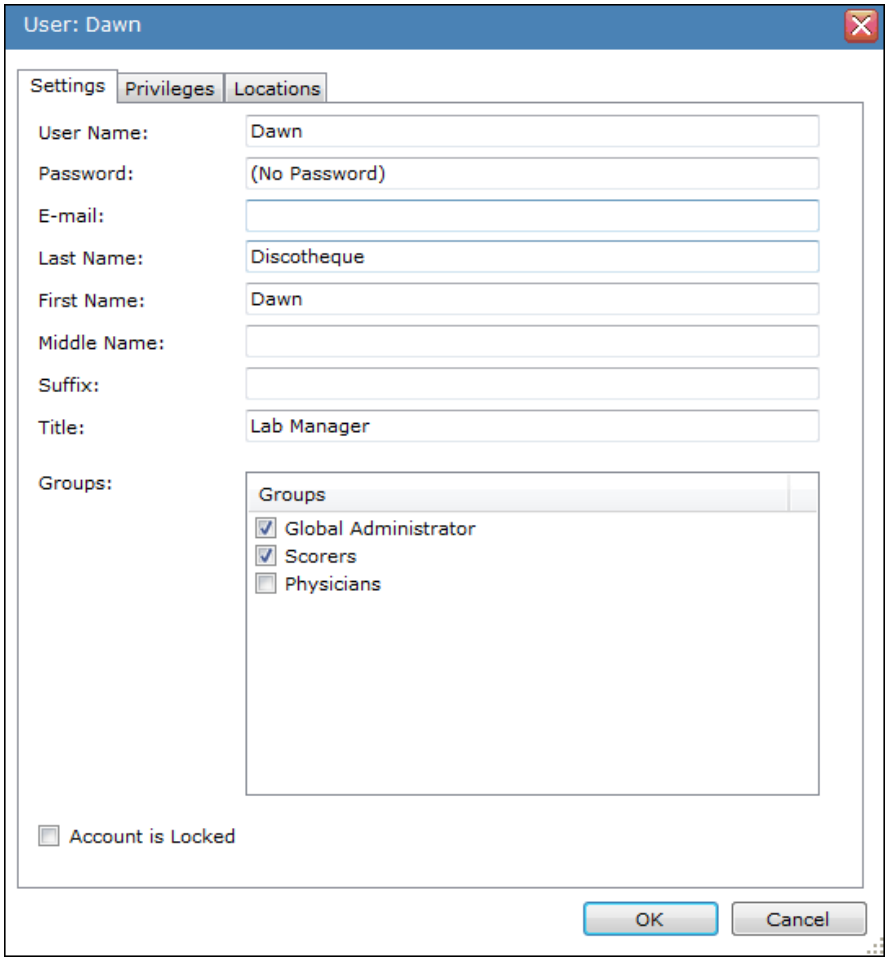


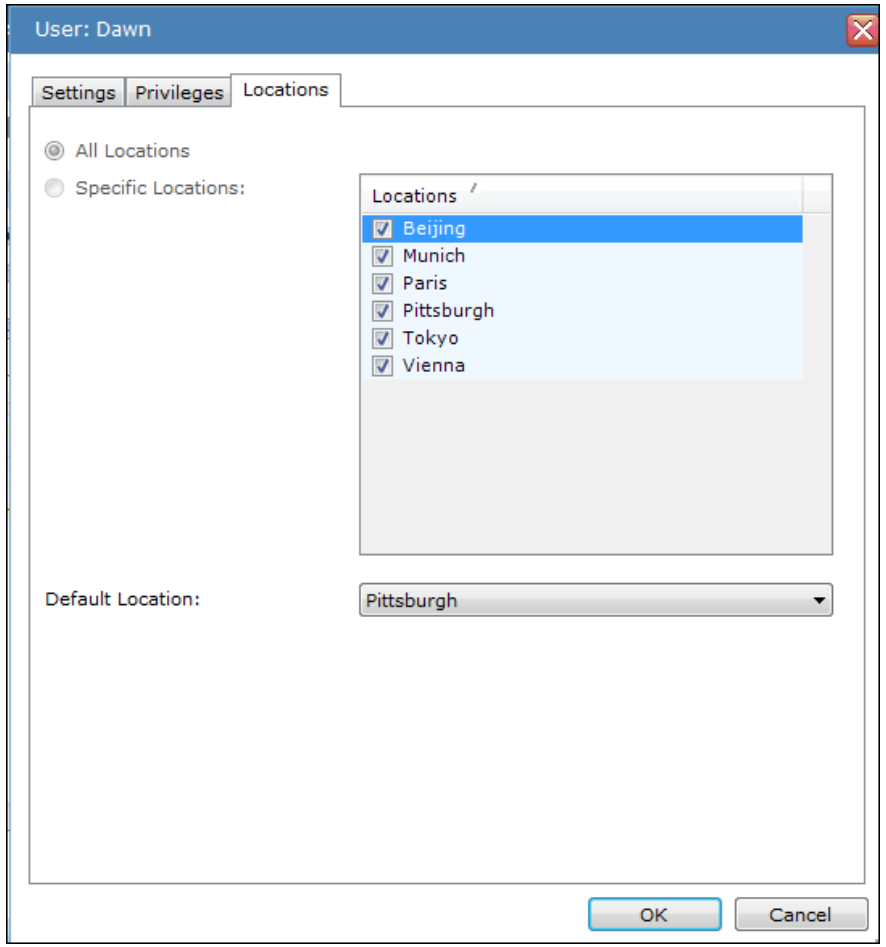


- Users can be assigned one or more locations.
- Users should be assigned a default location.
- If this user creates a patient in Sleepware G3, this default location will be used as a patient's location (unless changed).

PHILIPS

Assigning Locations to a Sleepware G3 User

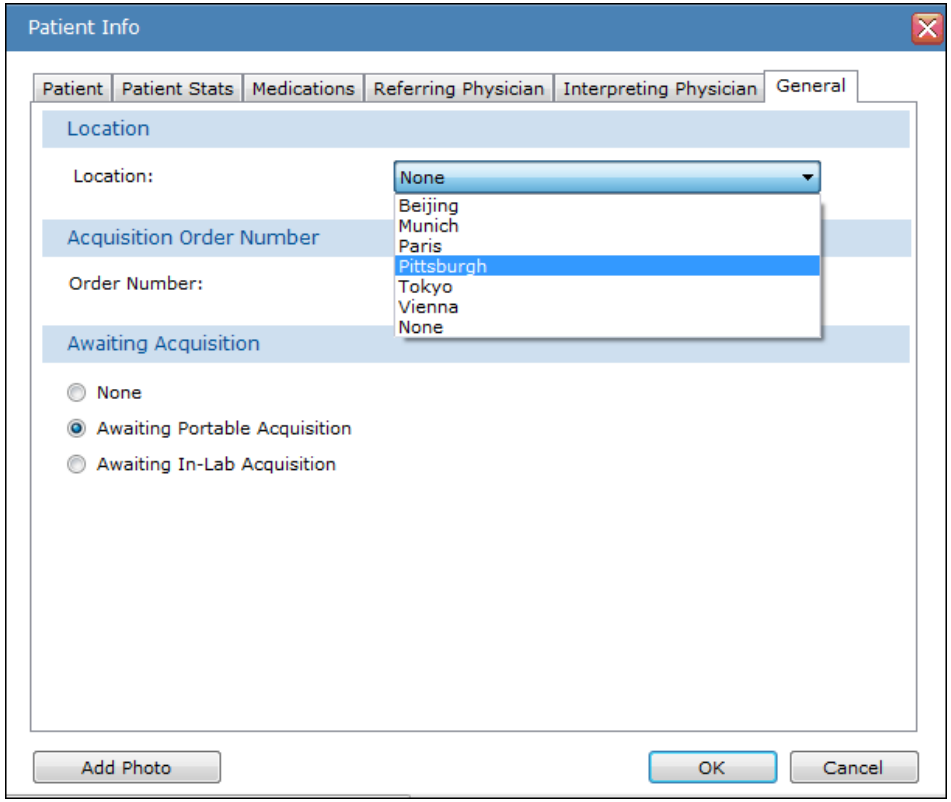




All members of the Global Administrator group will have the access of ALL locations, which cannot be changed.

PHILIPS

Assigning a location to a patient record



(Note: Adding a location to a patient record will be covered in the User Management section of this presentation.)

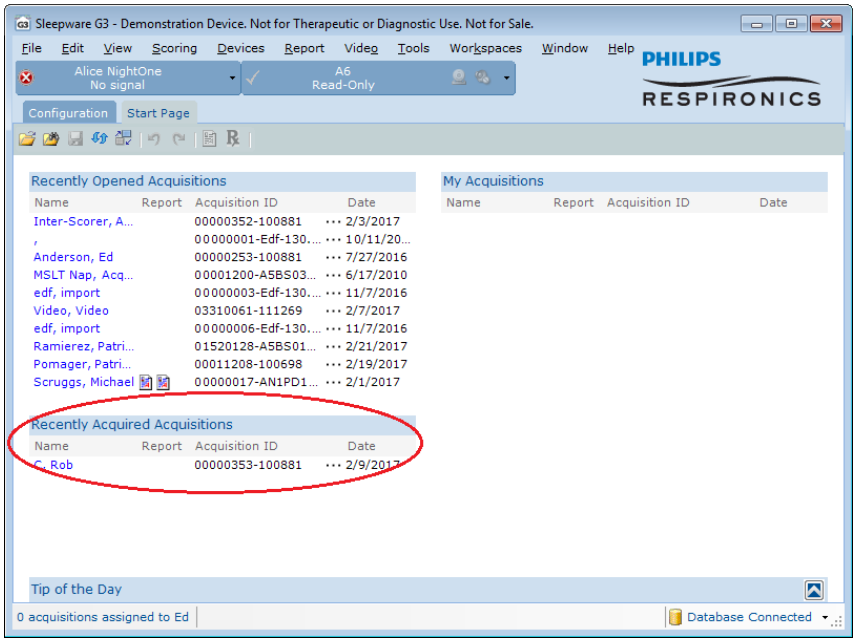
- Location is selectable from within the Patient Info file when adding a new patient or editing the record of an existing patient.
- Acquisitions that were acquired prior to Sleepware G3 v. 3.9.0 will be assigned the location of none.
- The use of locations is optional and the location called "None" is provided as the default.
- Any Sleepware G3 user can view any patient whose location is marked as "None."

PHILIPS

Location & the Start Page

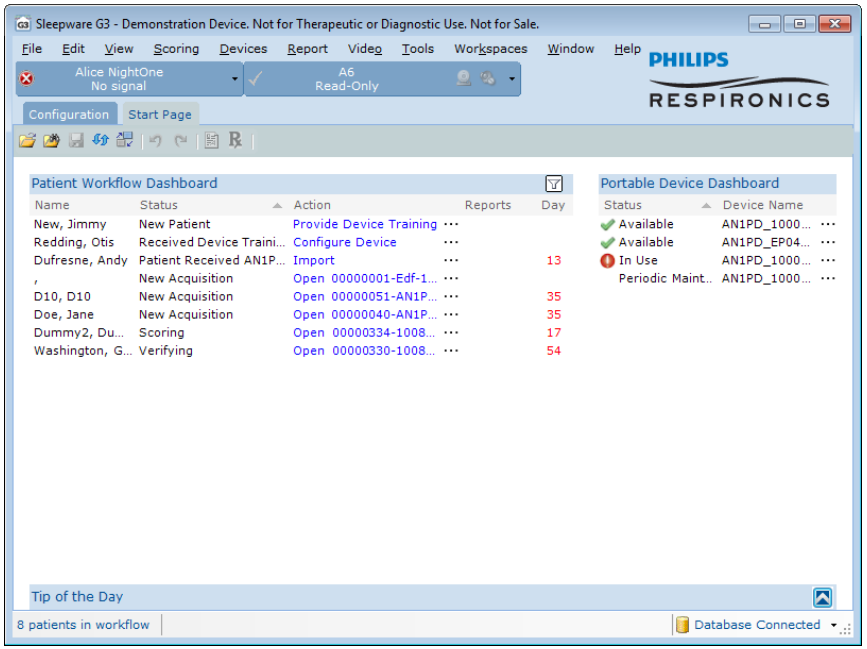
The recently acquired acquisition list will display acquisitions:

- From patients with the same location as the user logged in.
- From patients with the location of None.



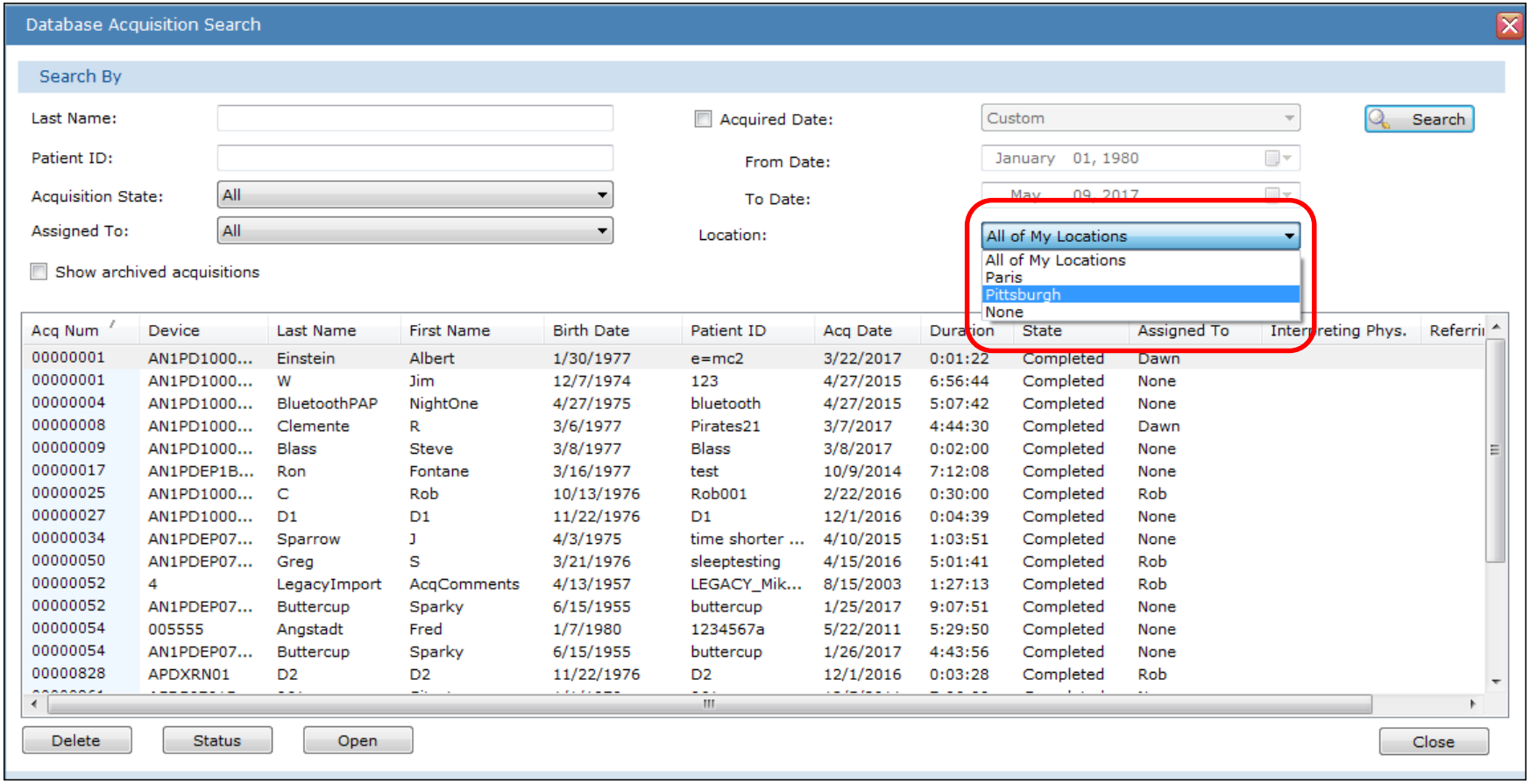
The patient dashboard will display acquisitions:

- From patients with the same location as the user logged in.
- From patients with the location of None.



Location and Search

The location field is a dropdown box populated with all the locations that the user is assigned, as well as the choice of “All of My Locations” and “None.” “All of My Locations” is the default.



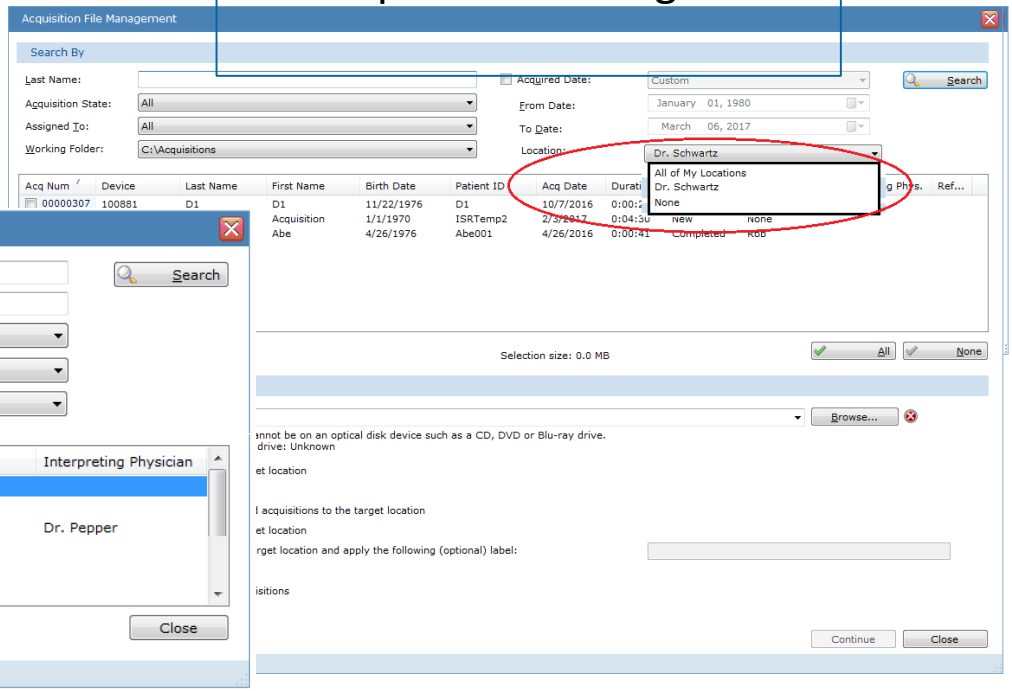
PHILIPS

Other Places to view Locations

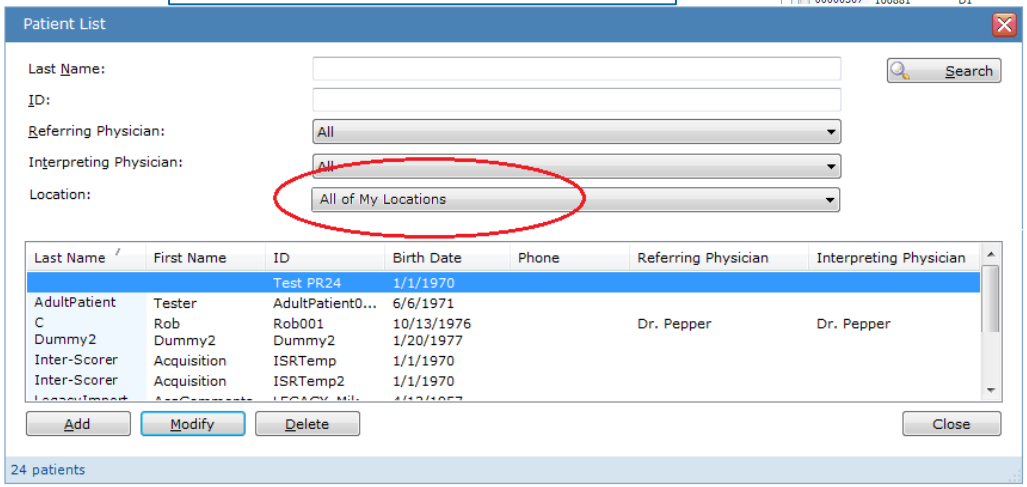
In these G3 areas, only patients in locations that are the same as what the user has will be displayed:

- File Acquisition Management
- Patient Entry Tool
- Cloud Management

File Acquisition Management



Patient Entry Tool



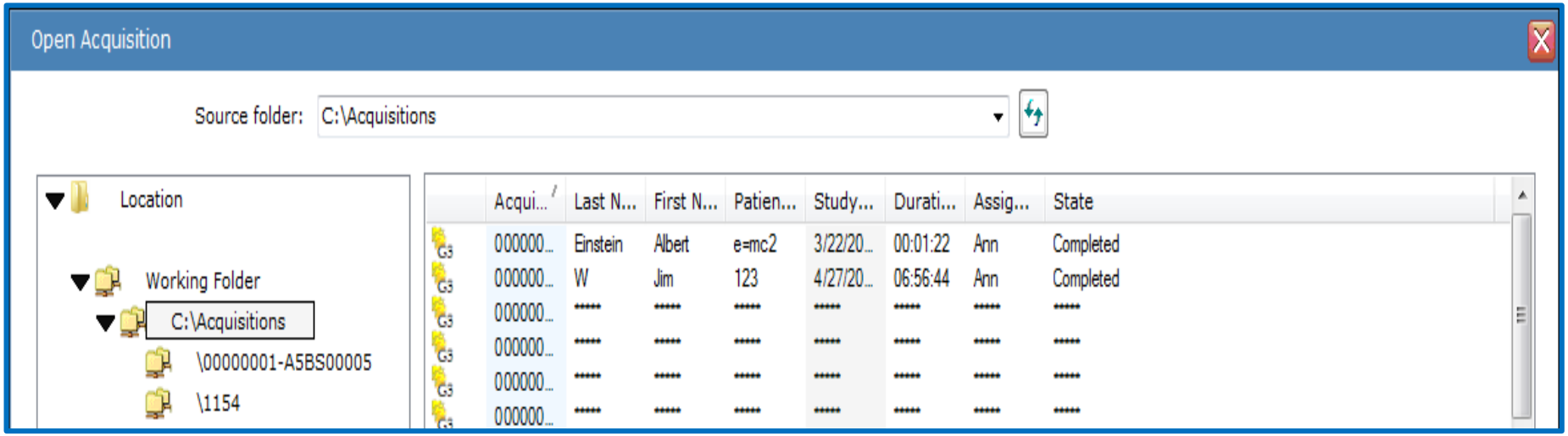
PHILIPS

Other Places to view Locations (continued)

In these places, the patient name will simply be hidden from the user if the patient/acquisition *is from a location not assigned to the current user."*

- File Open (screen shot below)
- Portable Device Manager (Tools > Portable Device Manager)
- Alice NightOne Import
- Alice PDx Import

A user will still be able to import a study from Alice NightOne and Alice PDx but the patient name will not be visible.



PHILIPS

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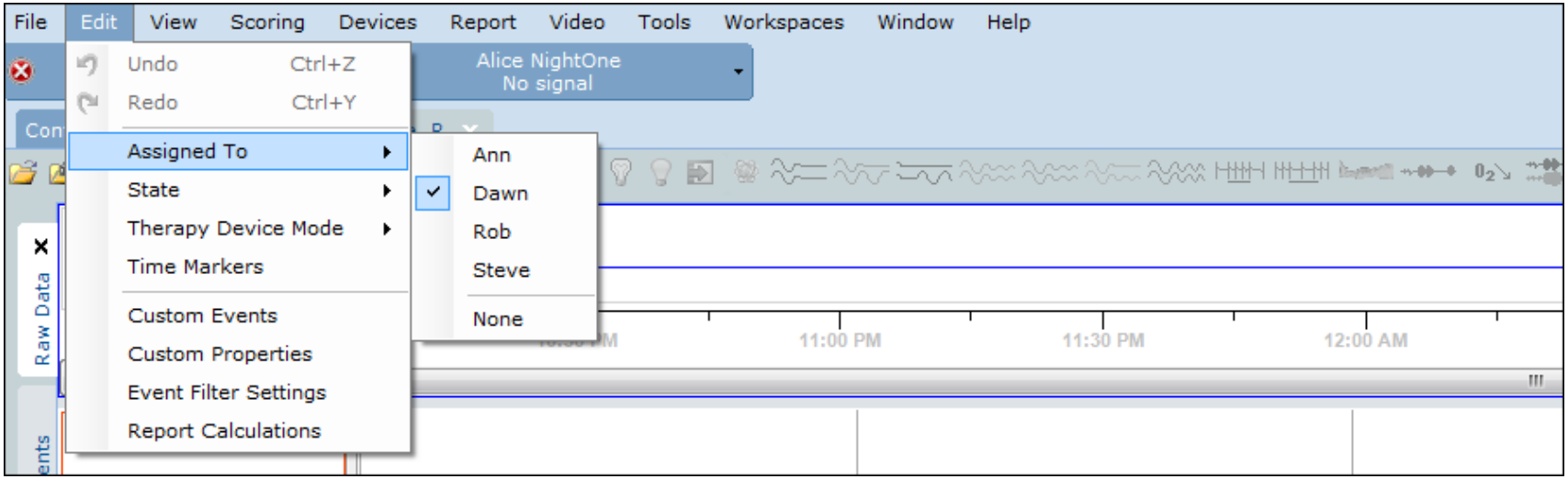
Locations and User Assignment

Only the users with the same Location as the patient for the acquisition will be displayed.
Users from one location will not be able to see users from a separate location.



PHILIPS

PHILIPS

Location field
Upgrade considerations

The locations field in Sleepware G3 is new with v 3.9.0.
When a customer first upgrades to 3.9.0

- All patients are automatically set to a default location of “None.”
- Locations must first be configured to use them. Configuration Page > Locations.
- Locations must be assigned manually to Sleepware G3 users. Configuration Page > Users > Location tab.
- Locations can then be assigned to patients. Tools > Patient List.
- After locations have been assigned to a user, it is the default location for the user that will be assigned to patients created by this user. It is possible to assign a different location to a user.

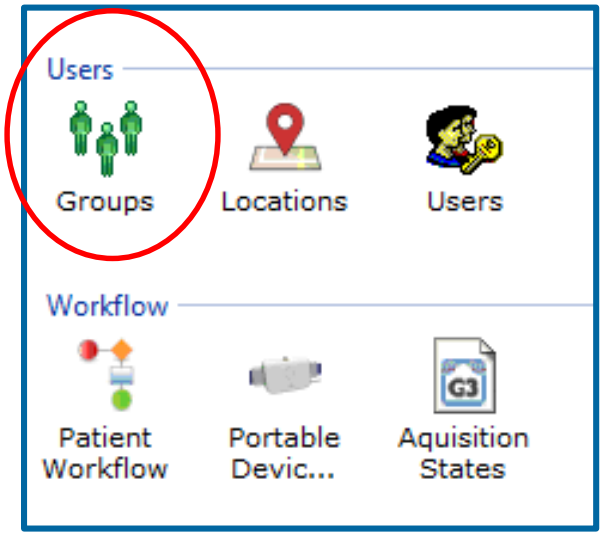
If it is desired to assign a location to a patient’s files whose acquisitions were collected prior to 3.9, the user must edit each patient record individually. There is not a function within Sleepware G3 that allows for a bulk location assignment, although our Product Support team does have a utility that can perform this function for you.

PHILIPS

Workflow Efficiency
Part 2.
Group and User Management

PHILIPS

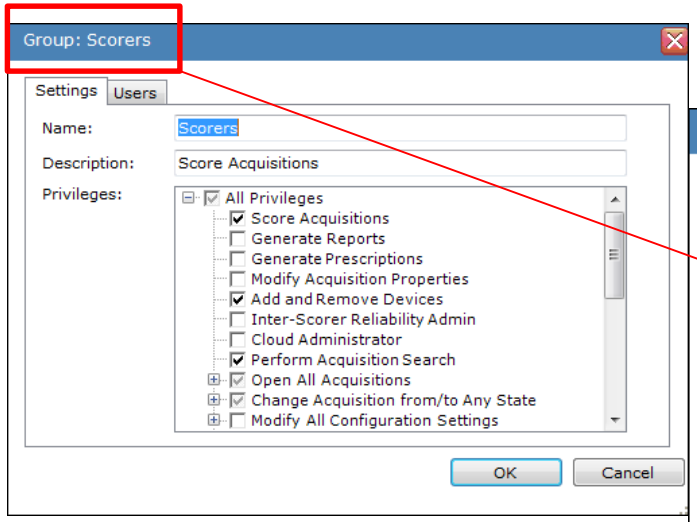
Workflow Efficiencies

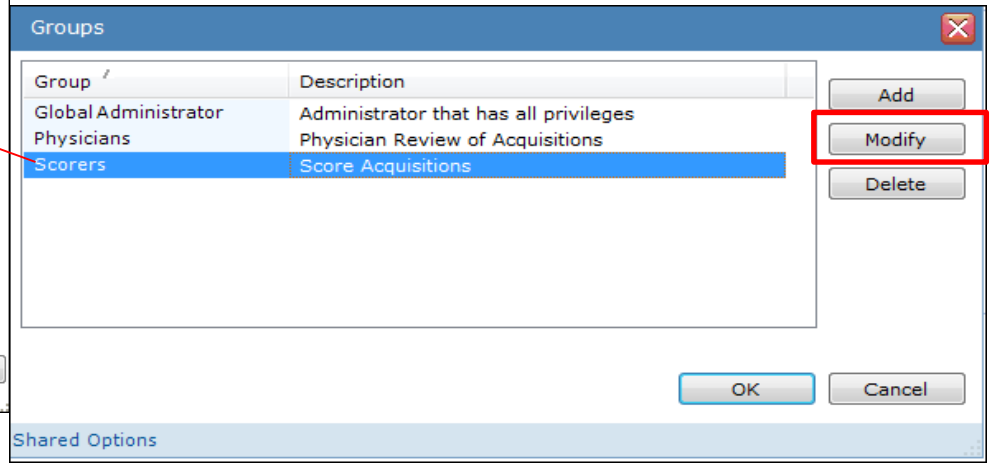


Groups

A quick review about Groups:

- By default, the following groups appear: Global Administrator, Scorers, and Physicians.
- New groups can be created and existing groups can be deleted.
- Users, upon setup, are assigned to one or several of these groups.
- System privileges for a group can be assigned that will apply to users in the group.

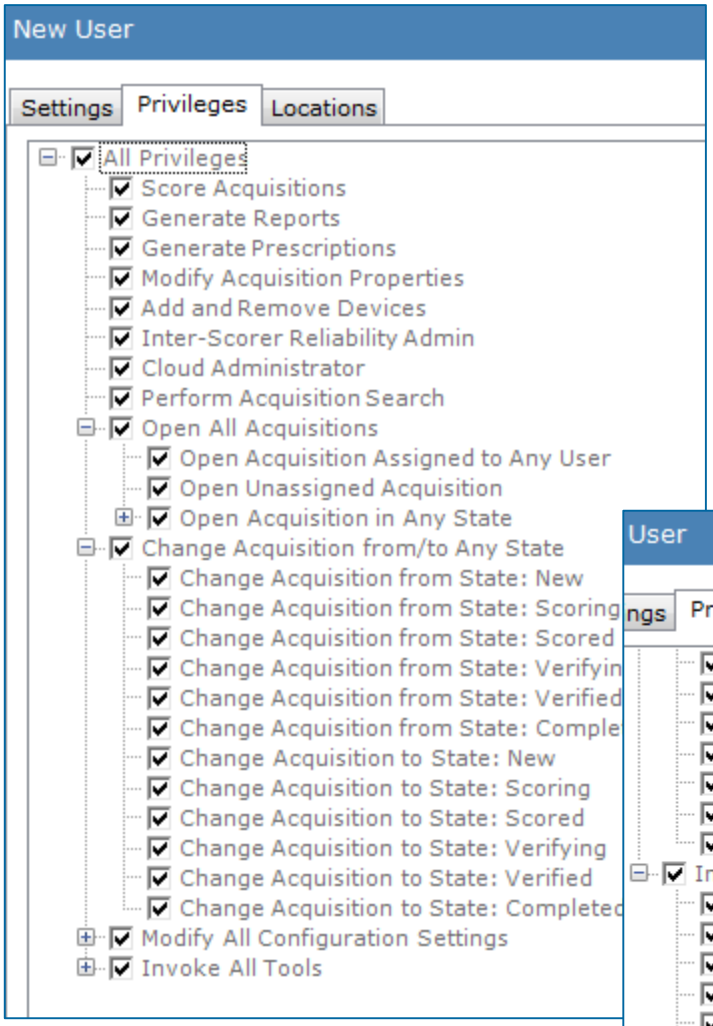


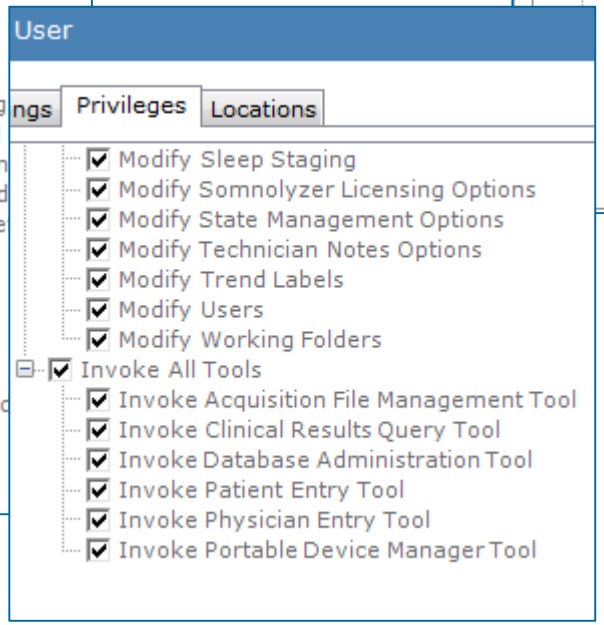


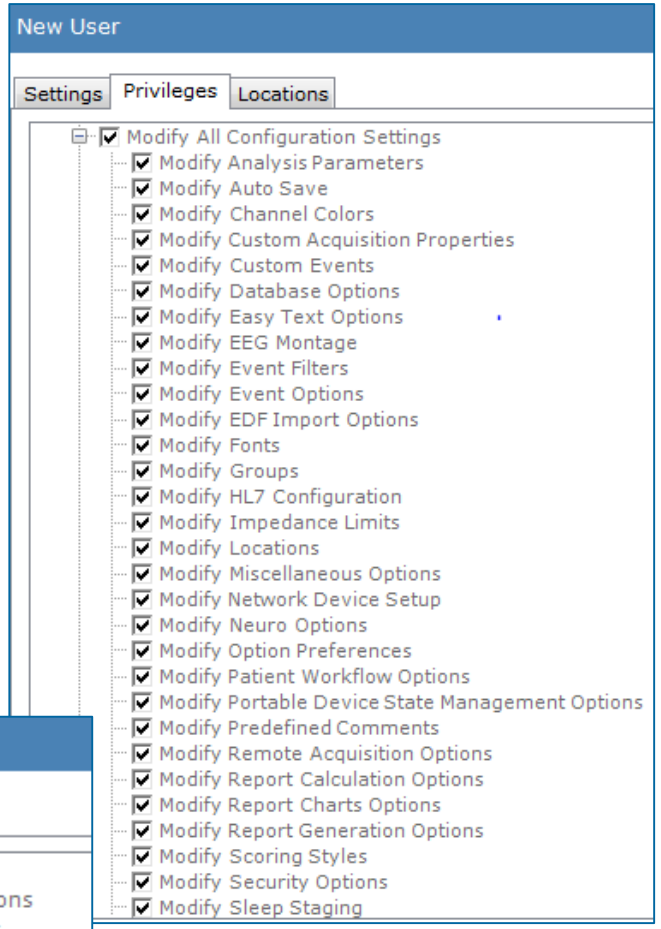
*On the next slide, all privileges will be shown.

PHILIPS

User Privileges that can be assigned to groups - the complete list

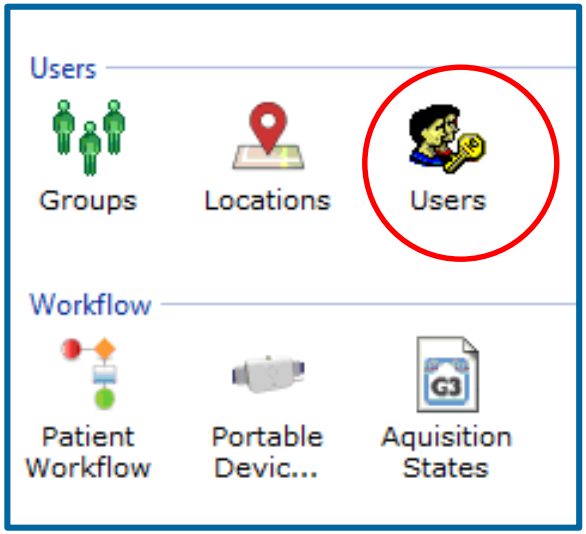






PHILIPS

Workflow Efficiencies
User Management



The benefits of managing Users in G3:

Adding and managing users to Sleepware G3 allows individual user login.

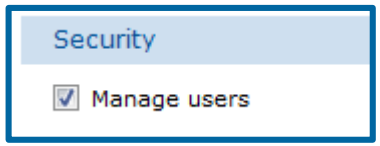
A user can be assigned to a Group with select privileges.

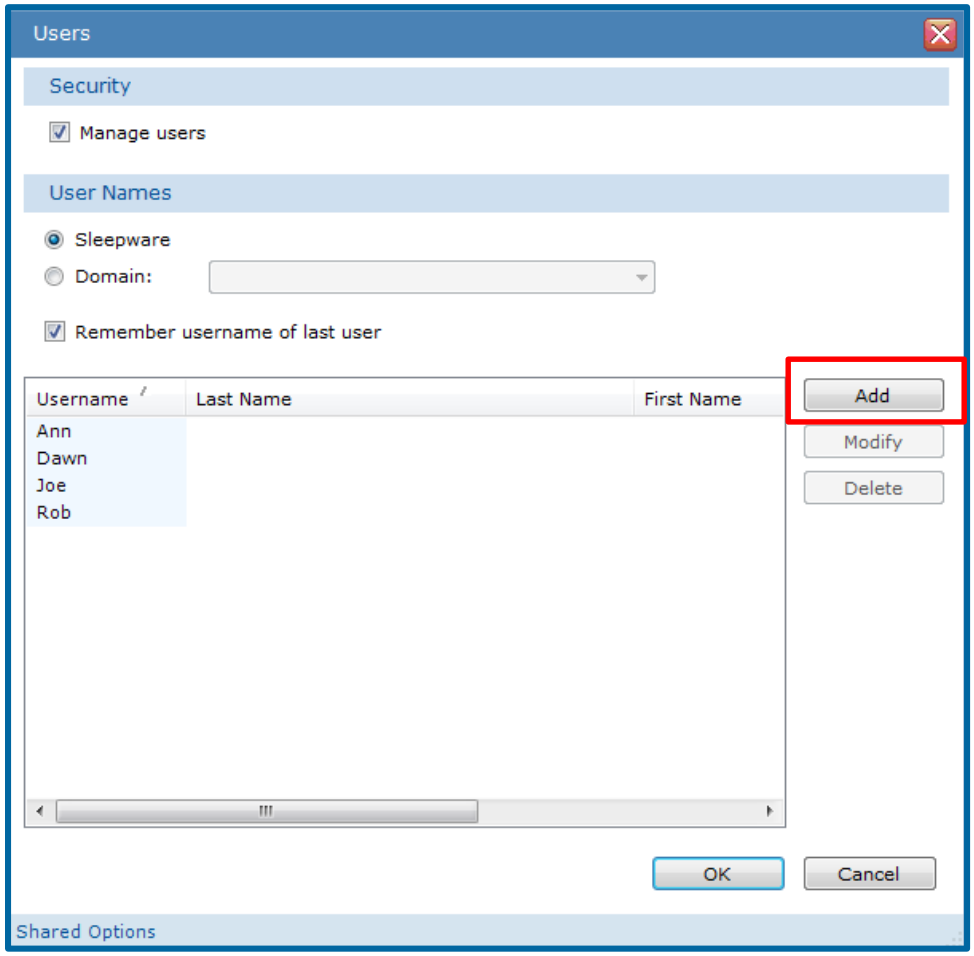
A user can customize workspaces, select software preferences, and determine feature response settings.

Users give the ability to assign sleep studies to specific users in order to optimize workflow. For example, when a study is collected it can be assigned to the lead scorer. Once the scoring is complete, the lead scorer can assign it to the interpreting physician to review.

PHILIPS

Managing Users





To add a user, select Add.

By managing users, users must log into Sleepware G3 using their own username and password (password is optional).

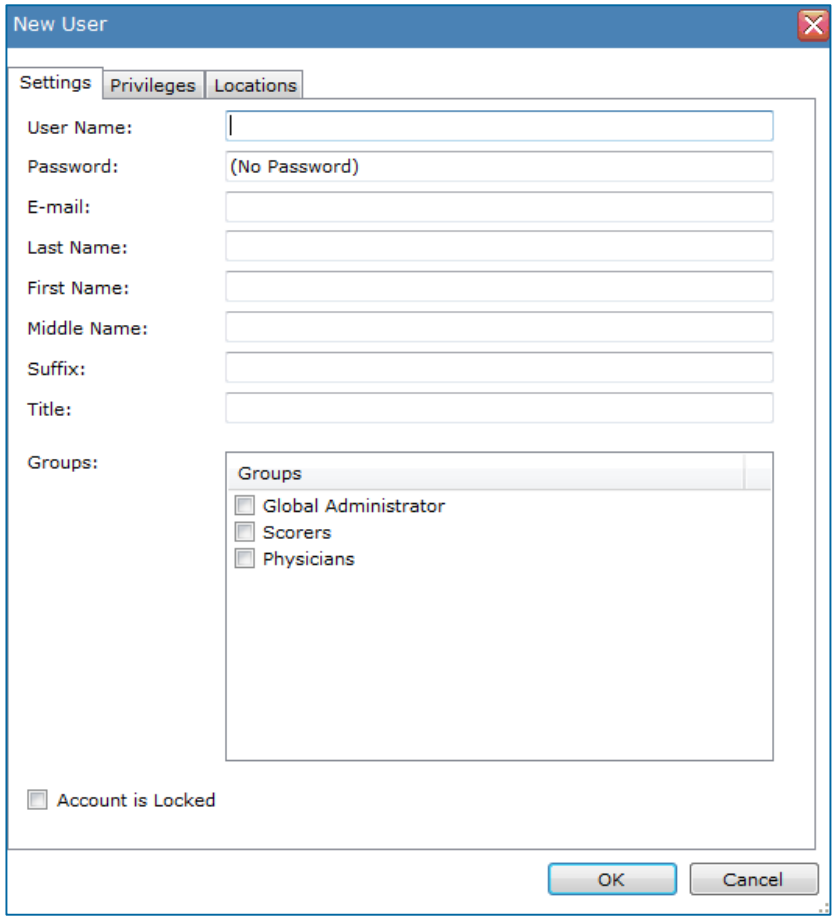
There is an option to choose your Domain user name and password, which will be the same as your login for Windows. Once you log into Windows, Sleepware G3 will open by double left-clicking on the Sleepware G3 icon.

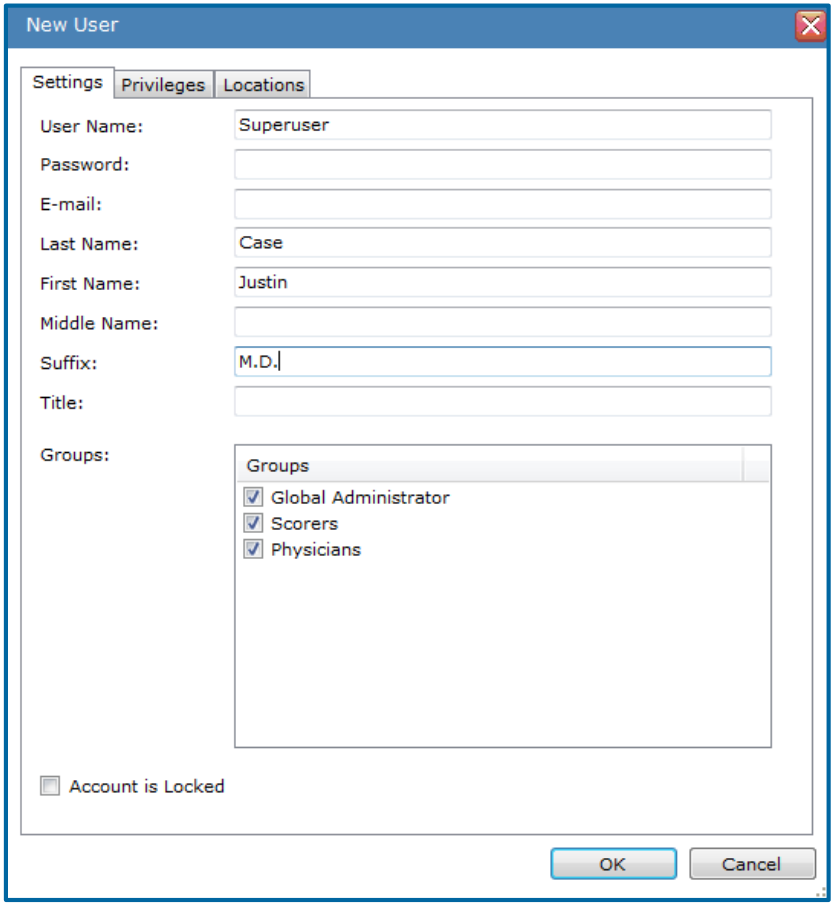
Or, you may choose to create Sleepware G3 usernames and passwords.

If the **Remember username of last user** option is selected, Sleepware G3 remembers the user name of the last user that logged in. This option is enabled by default.

PHILIPS

Adding a user account
- Adding a user and assigning groups





For this user the User Name, Last Name, First Name, and Suffix are entered and Groups are selected. The option to not use a Password was chosen.

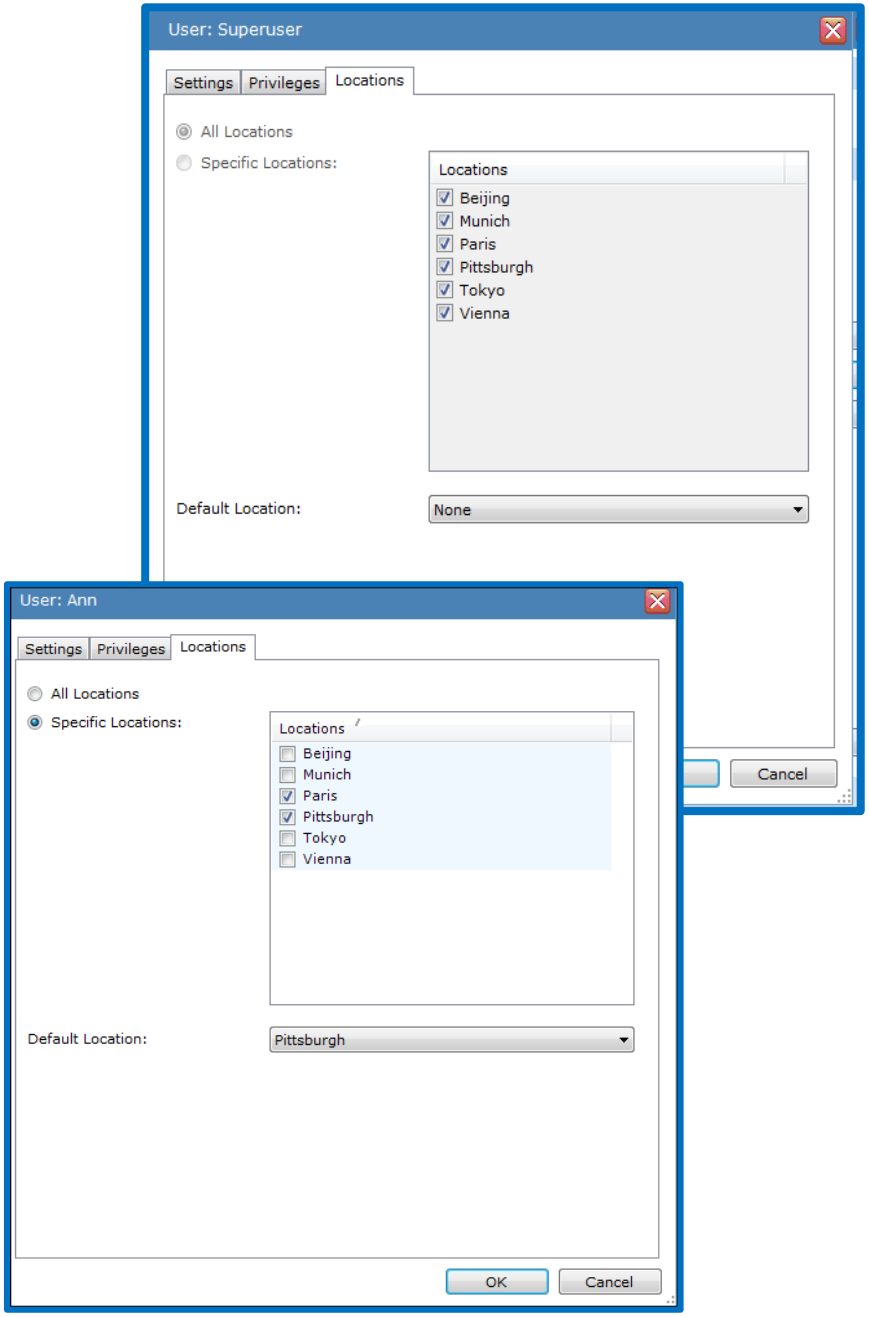
*Note: If using electronic signature, Last Name and First Name must be entered.

PHILIPS

User Management

User locations

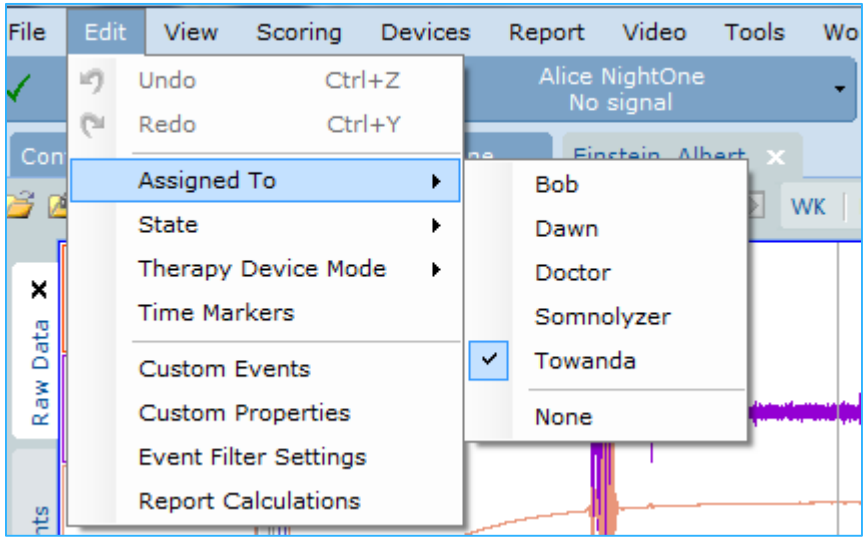
- Assign Locations to a User.
- A choice of **All Locations** or the **Specific Locations** option are available.
- Specific Locations is not available for Global Administrators. A Global Administrator will be assigned to ALL locations.
- If you select the Specific Locations option for a user, you can then select one or more of the **Locations** listed.
- You can apply a default location for a user by selecting it from the **Default Location** drop-down list.
- Click **OK** to save the changes and close the User window.
- A default location for a user can be changed at any time by a Global Administrator.



PHILIPS

User Management

Assigning acquisitions to a specific user from within a patient record



When an acquisition is open, users will see their patients on the Acquisitions List Start Page under My Acquisitions. If on the Patient and Device Workflow Start Page, a users will see only the patients assigned to them there as well.

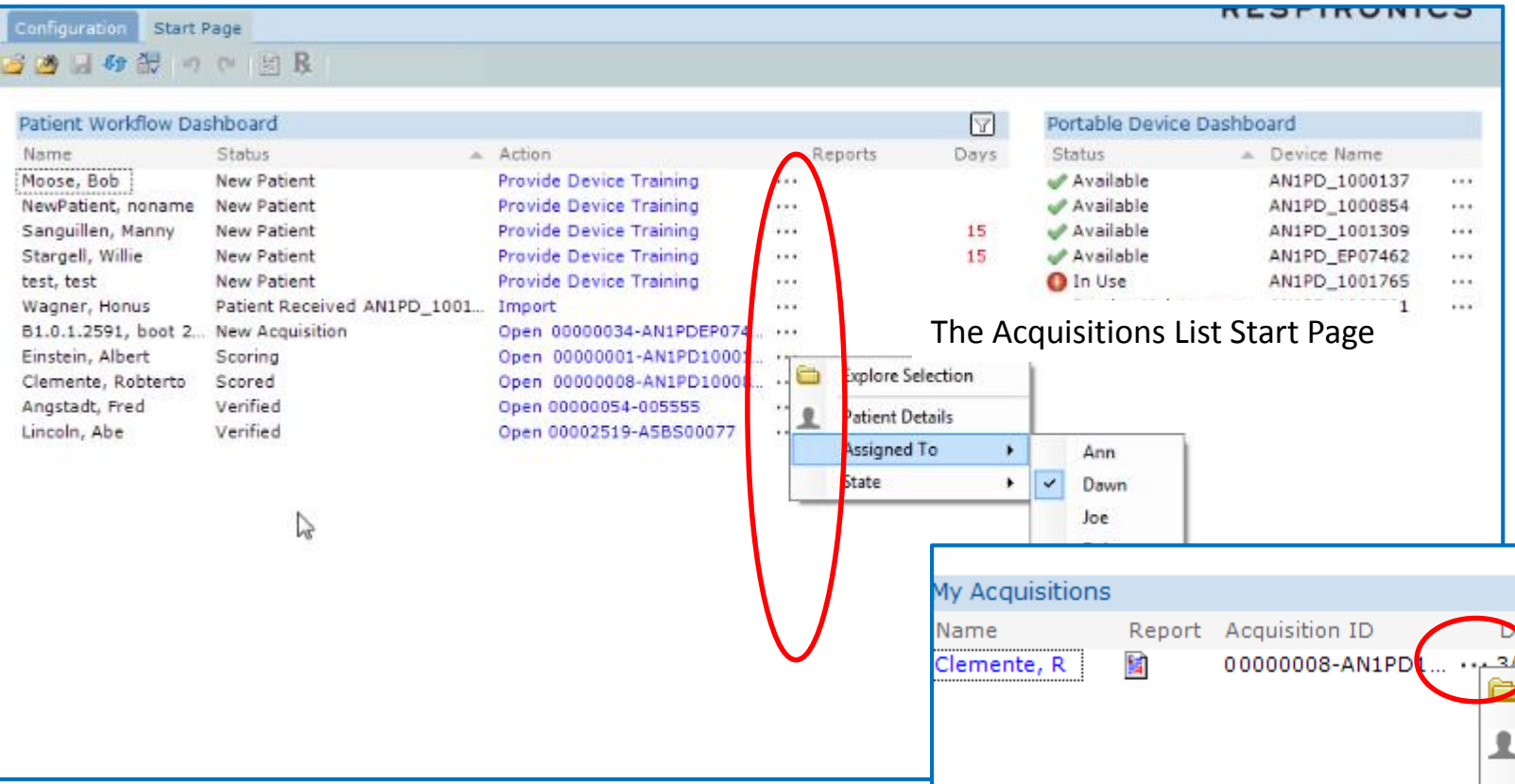
In order to assign a patient to another user while the sleep study record is open, the user selects Edit > Assigned To > and selects the user to whom they would like to assign the study.

PHILIPS

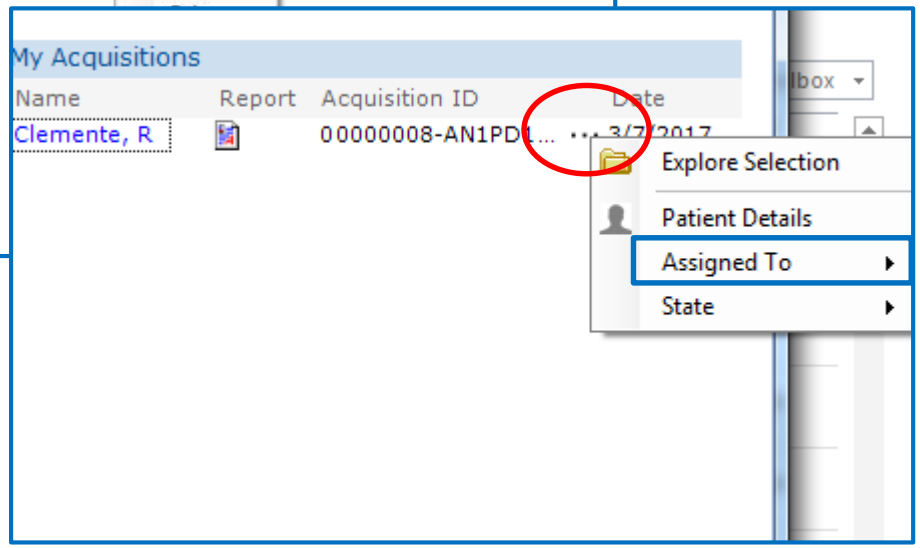
User Management

Assigning Acquisitions to specific users from the Start Pages

The Patient and Device Workflow Dashboard Start Page



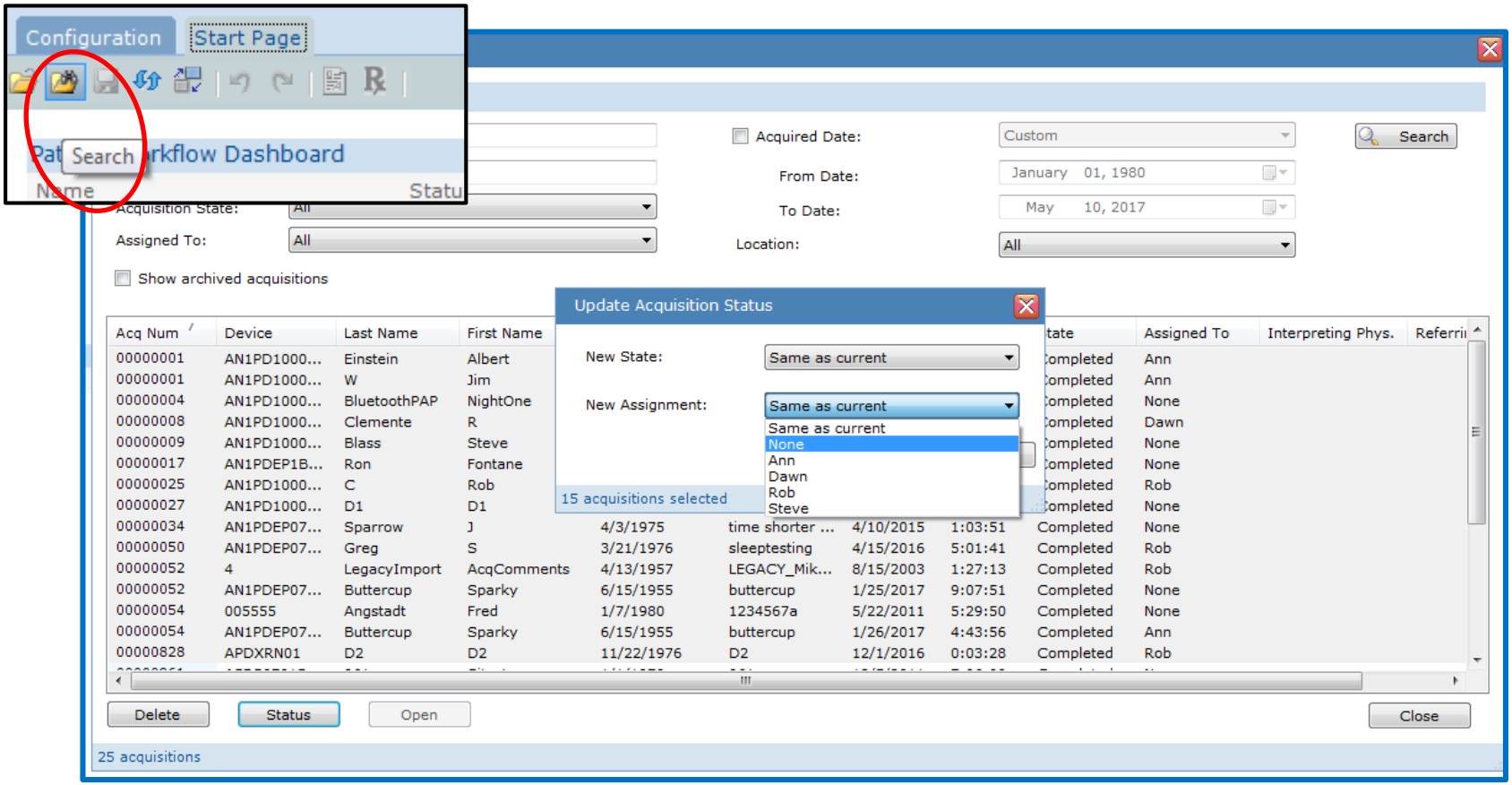
The Acquisitions List Start Page



Click on the Ellipses (…) for the patient record you would like to assign to a different user.
Ellipses > Assigned To > Desired username

Managing Users – changing user assignment to **None**

- The last step in the user assignment process is to assign the Completed Records to the default user of “None.” This process will clear patients from a user’s “My Acquisitions” list. Typically it will be a lab manager or lead tech who performs this function.
- To access the list to change this, select the Search folder on the Sleepware G3 toolbar. Next, select all of the studies whose user you would like to change to None. Next, click on the Status button at the bottom of the page, select the drop-down arrow in the “New Assignment” section, and select None. Click OK.



Performing this action is very important. If this is not performed, having too many patients on the start page can slow down the software.

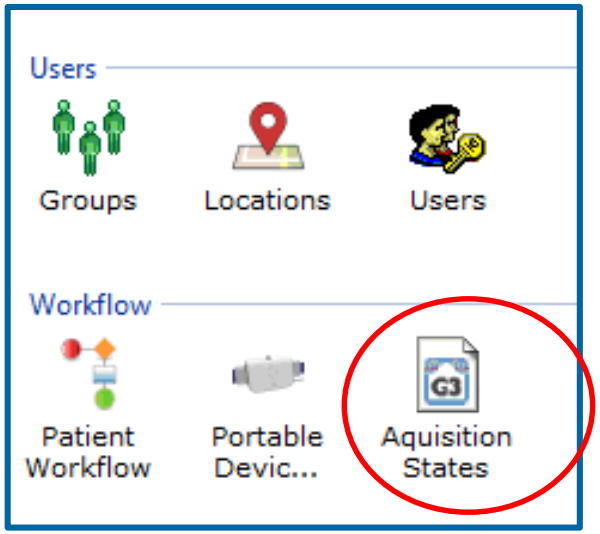
PHILIPS

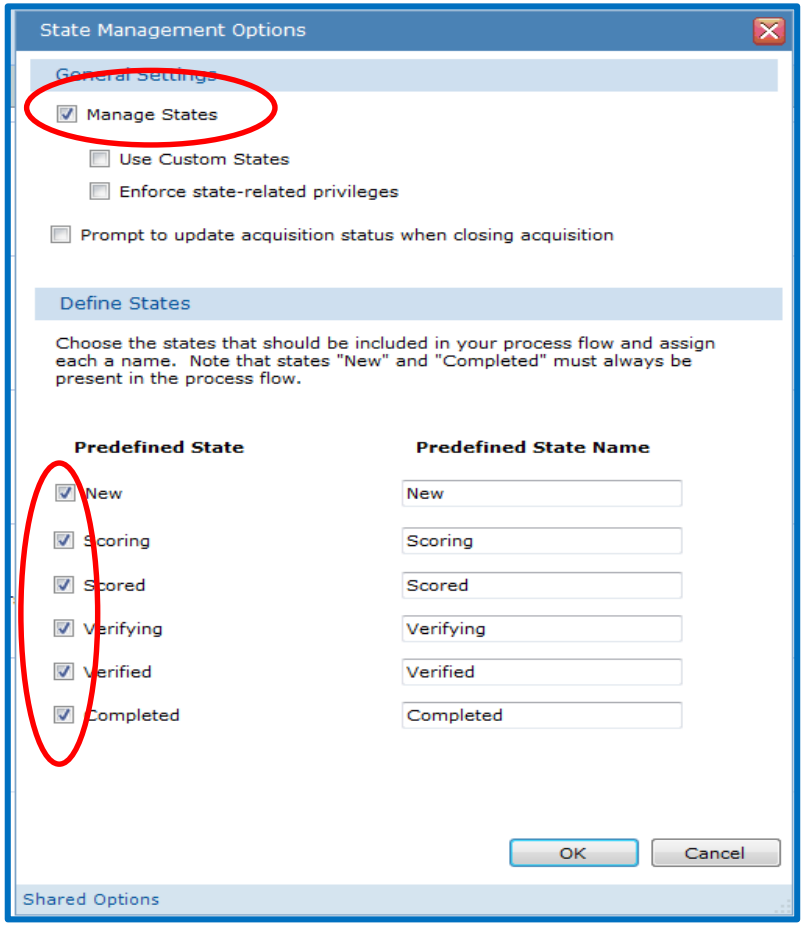
Workflow Efficiency
Part 3.
State Management

PHILIPS

State Management Options

With all Predefined States in Use:





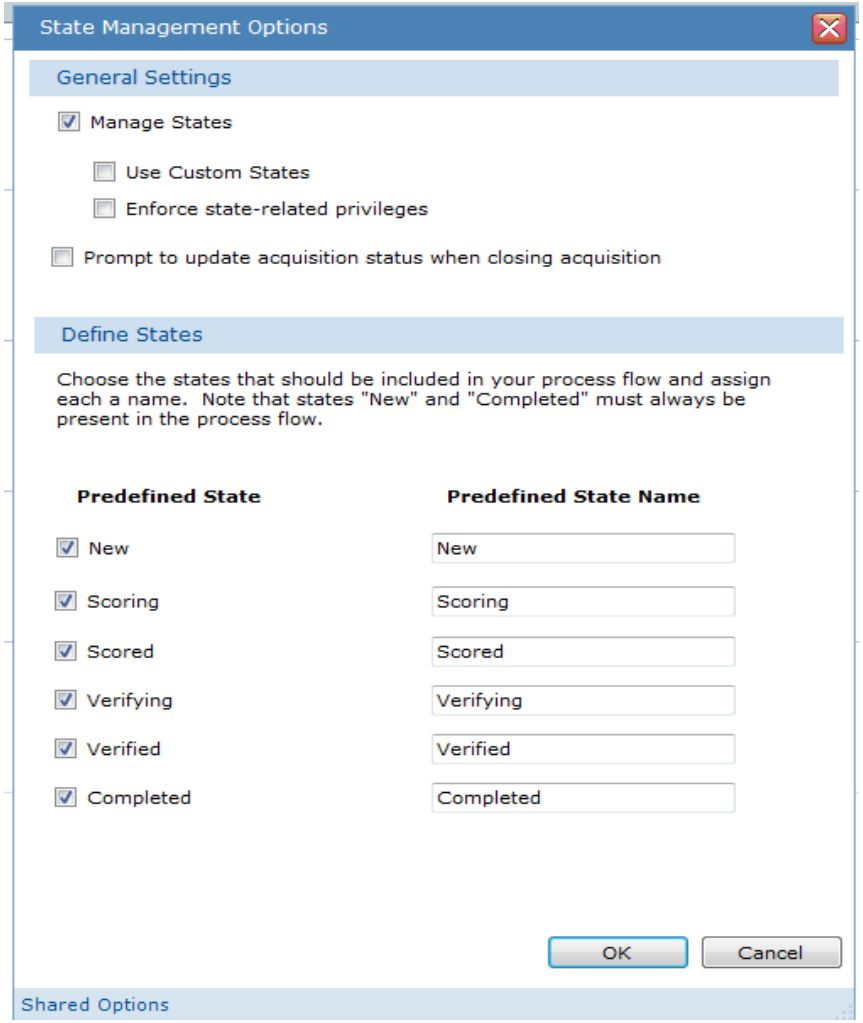
The State Management window allows you manage the *states* assigned to acquisitions. States allow acquisitions to be tracked as they progress through a workflow from New to Completed.

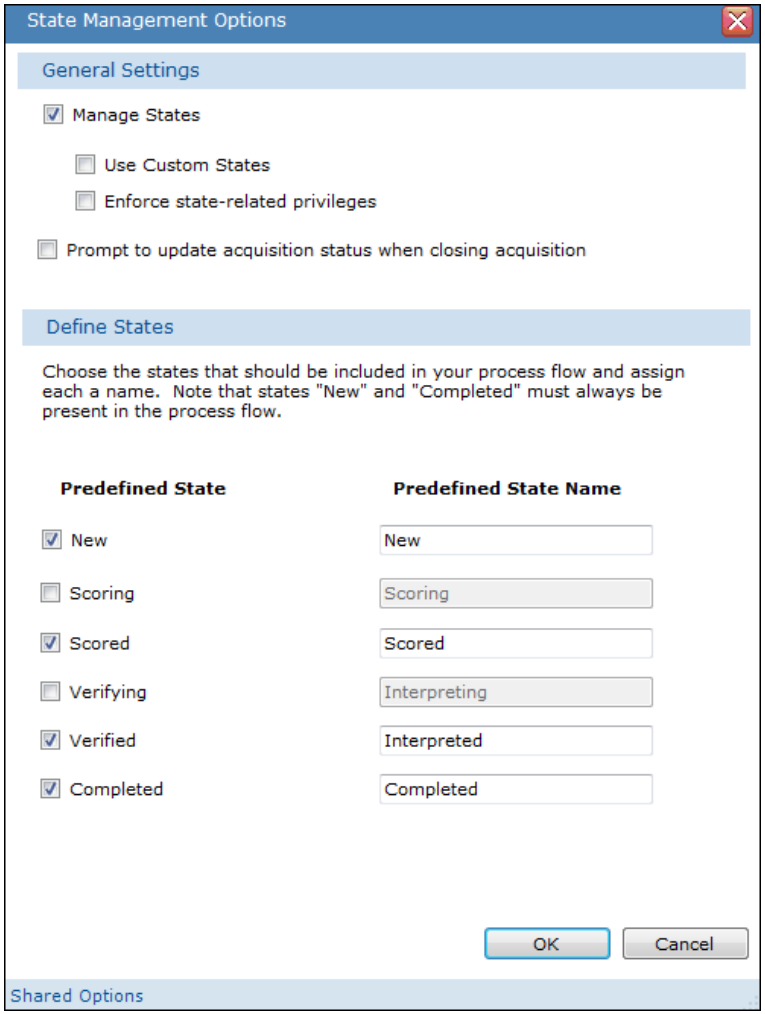
New and Completed must always exist as States. The others can be removed by deselecting them. The State Name for each can be edited. Enabling **Prompt to update acquisition status when closing an acquisition** can be done so by clicking the associated check box.

PHILIPS

Using State Management in G3

- For example, the diagram on the right shows that the names of the Verifying and Verified states have been changed to Interpreted and Interpreting and the Scoring and Interpreting state have been disabled.

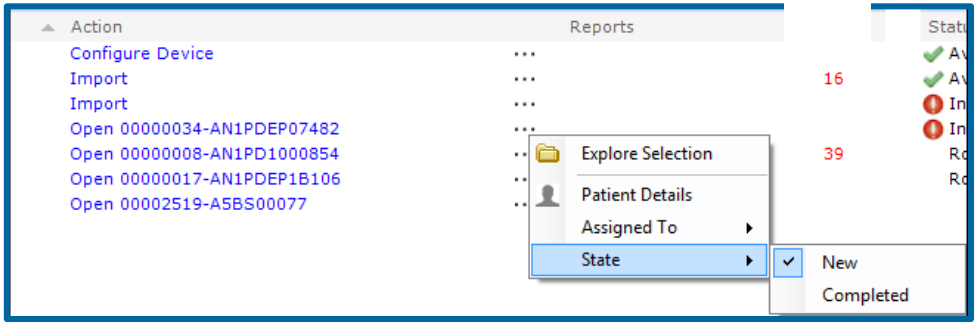




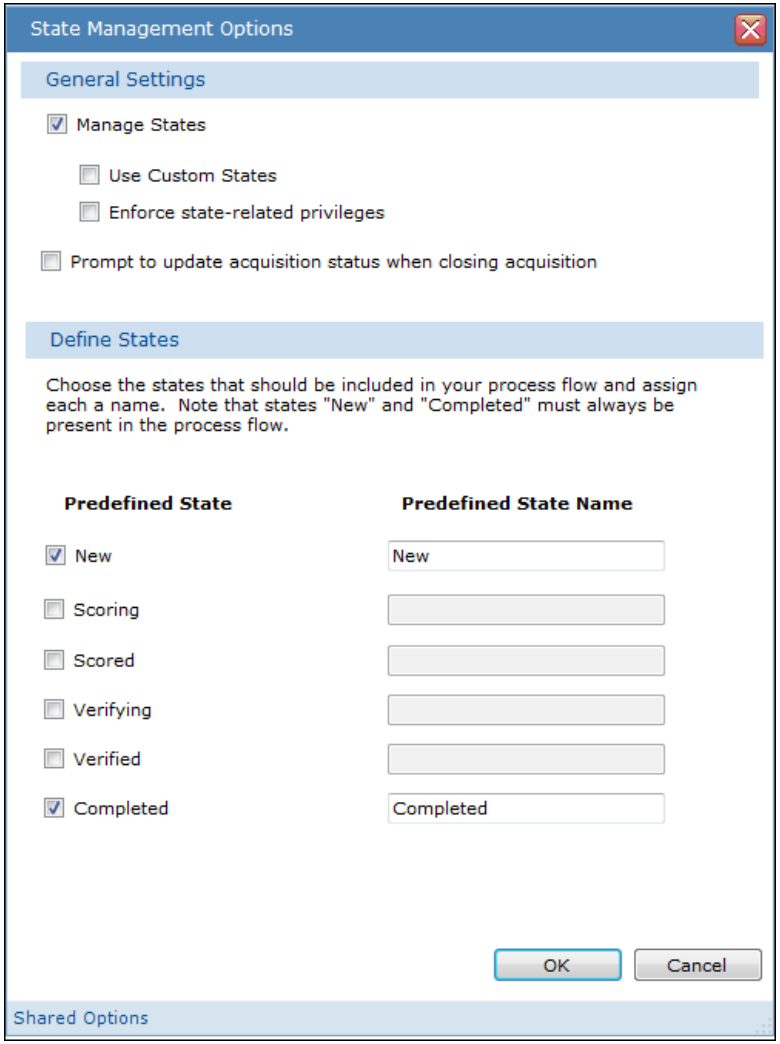
PHILIPS

State Management Options

You can deselect states from this list if you do not want to use them as part of the workflow. Although, New and Completed **must** remain, at a minimum in order to remove patients from the Patient Workflow Dashboard.



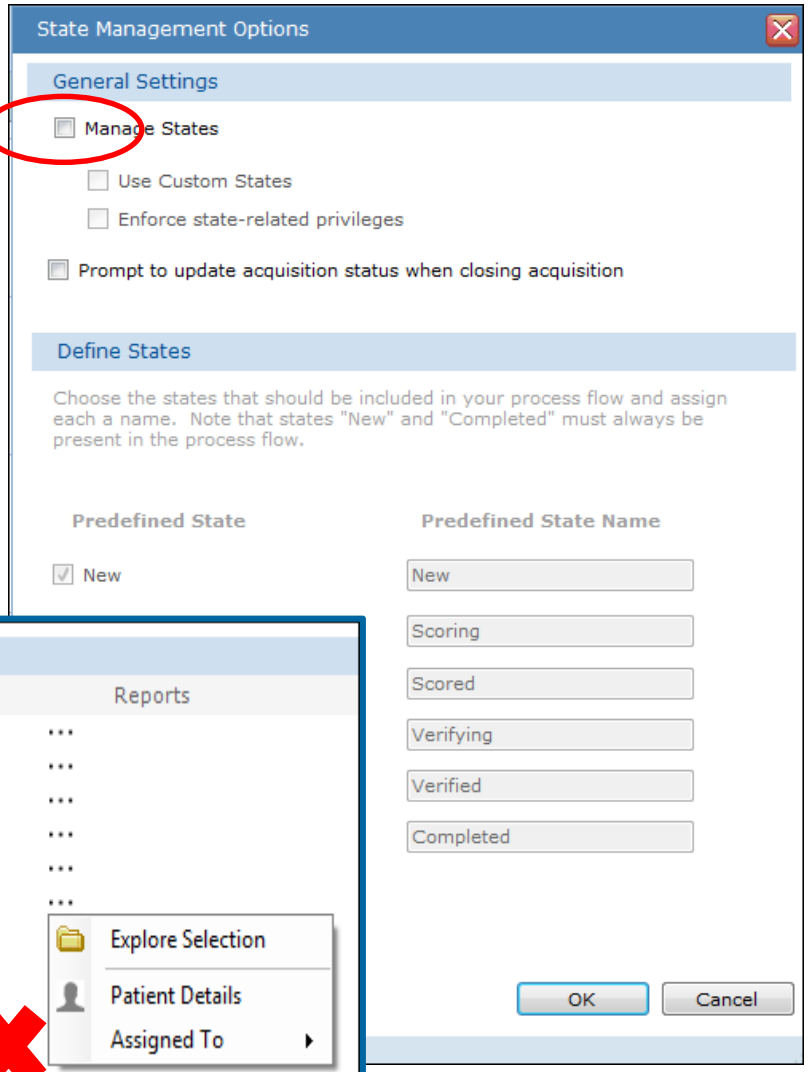
<u>It will be necessary to use the Completed state to remove patients from the dashboard once their cycles are completed</u>.

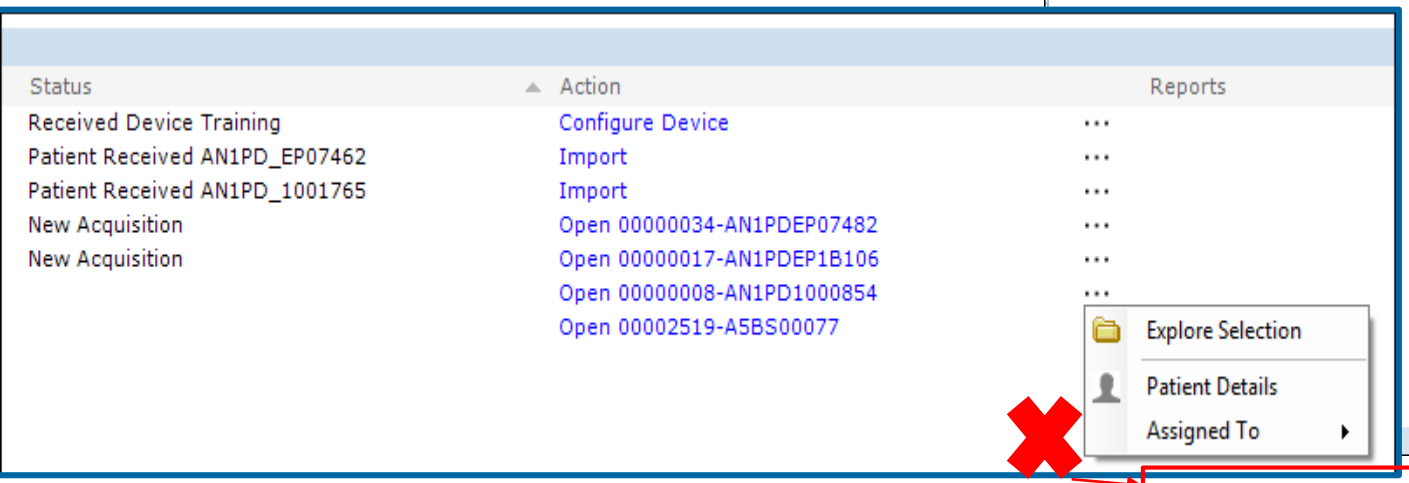


PHILIPS

State Management Options with Patient and Device Workflow Dashboard

If State Management is deselected, there is no way to mark an imported study as completed to remove it from the dashboard.



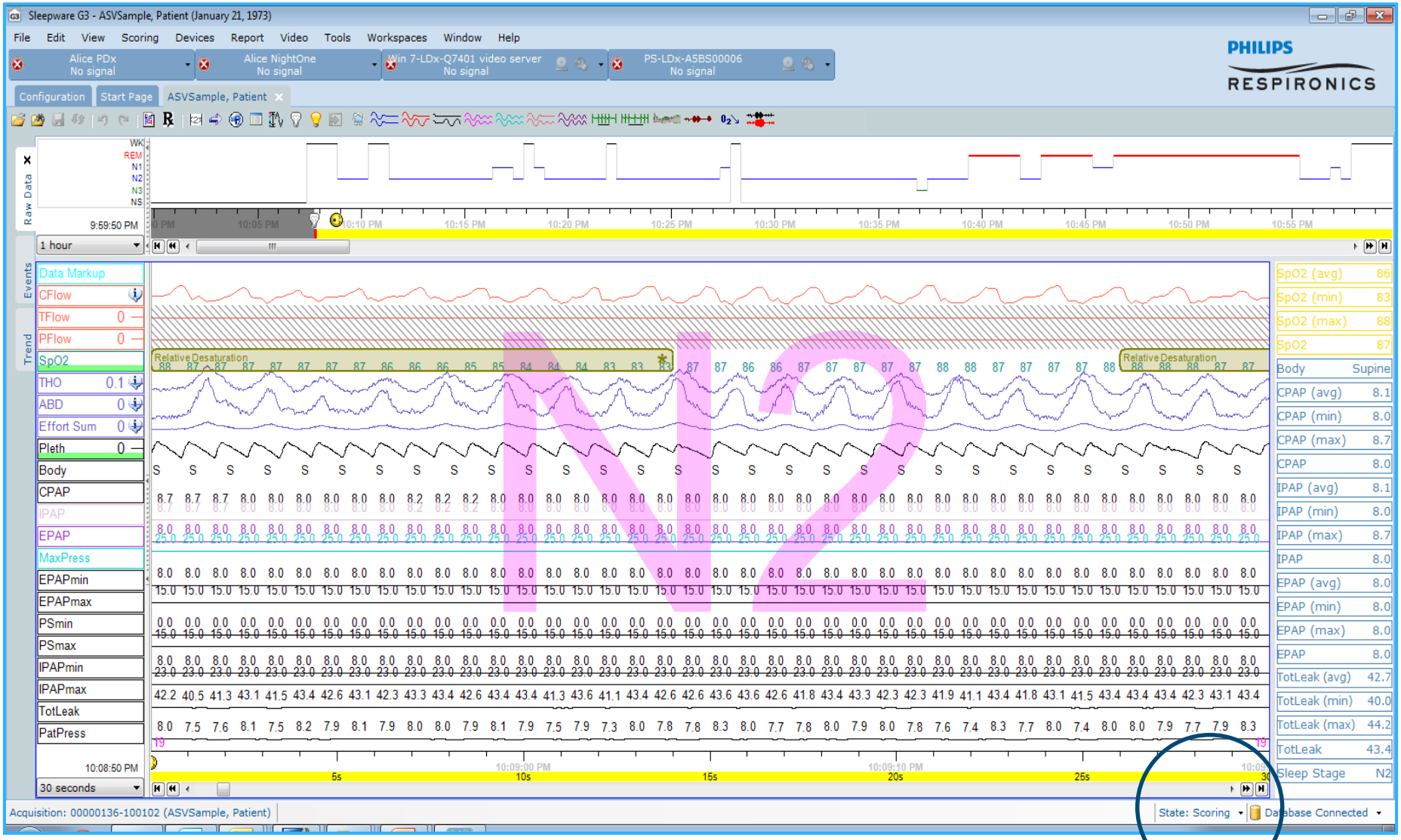


Changing state NOT available

PHILIPS

State Management – changing the status

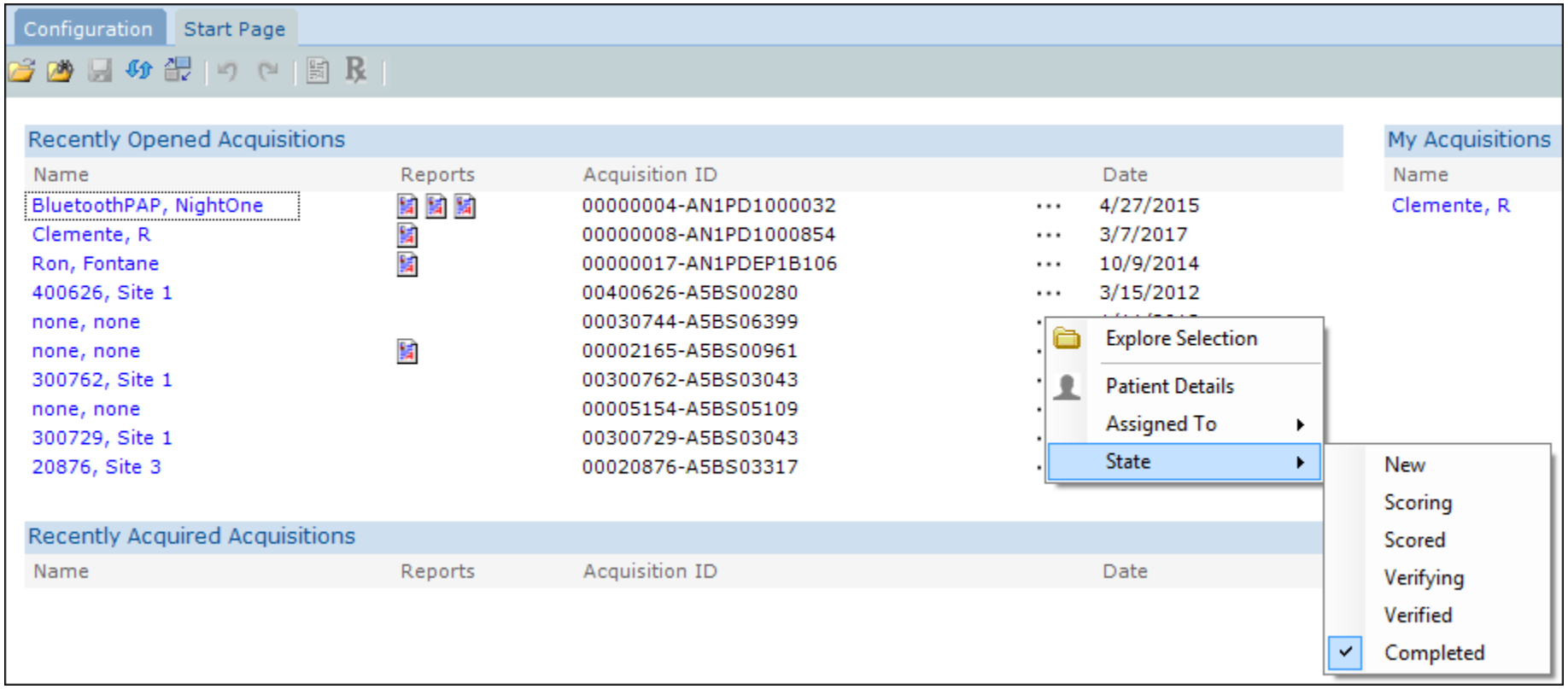
To change the status of an acquisition when it is open, the user can select the State tab on the bottom toolbar and select the status from the menu.



State Management – changing the status

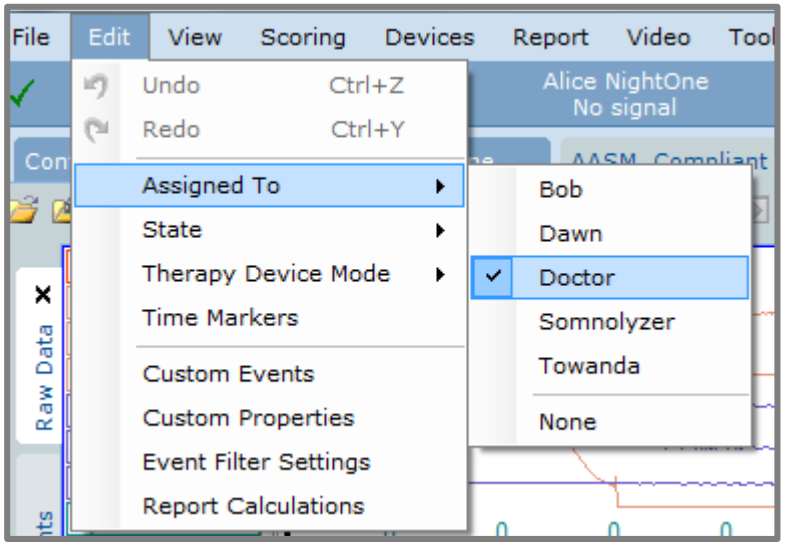
A user can click on the Ellipses (…) column from the Start Page to change acquisition state.

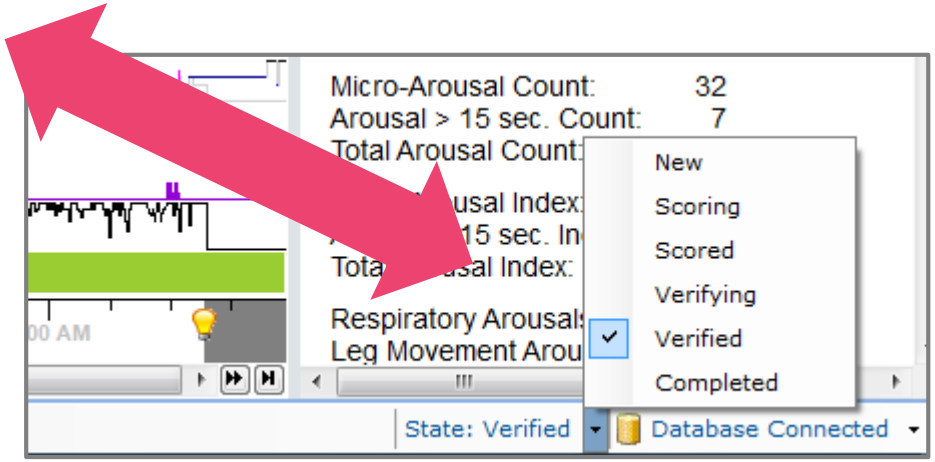
- Ellipses > State > Desired State



PHILIPS

Managing study status and user assignments



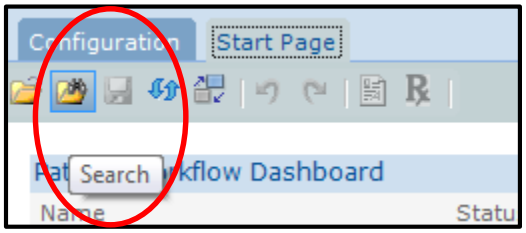


Acq Num	Device	Last Name	First Name	Birth Date	Patient ID	Acq Date	Duration	State	Assigned To
00100752	100519	ETCO2	Sample	1/8/2006	134580	11/5/2015	6:55:03	New	None
00000015	APDxX0043	AlicePDx	Sev_OSA	11/14/1948	32668446135	7/8/2008	8:15:00	Verified	Doctor
00004187	A5BS02621	4187	Site 3	1/1/1970	4187	4/18/2012	9:22:00	Scoring	Towanda
00000018	APDX60	APDx60	StdConfig+Act	1/17/1973	APDx60	1/17/2013	7:06:39	New	None
00031770	A5BS03358	Pediatric	Study	8/4/2003	LDG120911...	12/9/2011	10:12:15	Scoring	Todd
04000840	A5BS06177	EEG	TEST	9/26/1980	23233	4/10/2009	1:10:00	Verified	Doctor
00000036	A5BS01825	Sleep w video	test 1	1/11/1900	Sleep w vid...	1/25/2006	7:52:00	Completed	Towanda
00000004	AN1PD1000...	Night One	therapy	4/17/1975	243	4/20/2015	7:24:12	New	None
00000011	AN1PDEP03...	22	w	11/1/1974	w121	11/2/2014	8:01:28	New	None

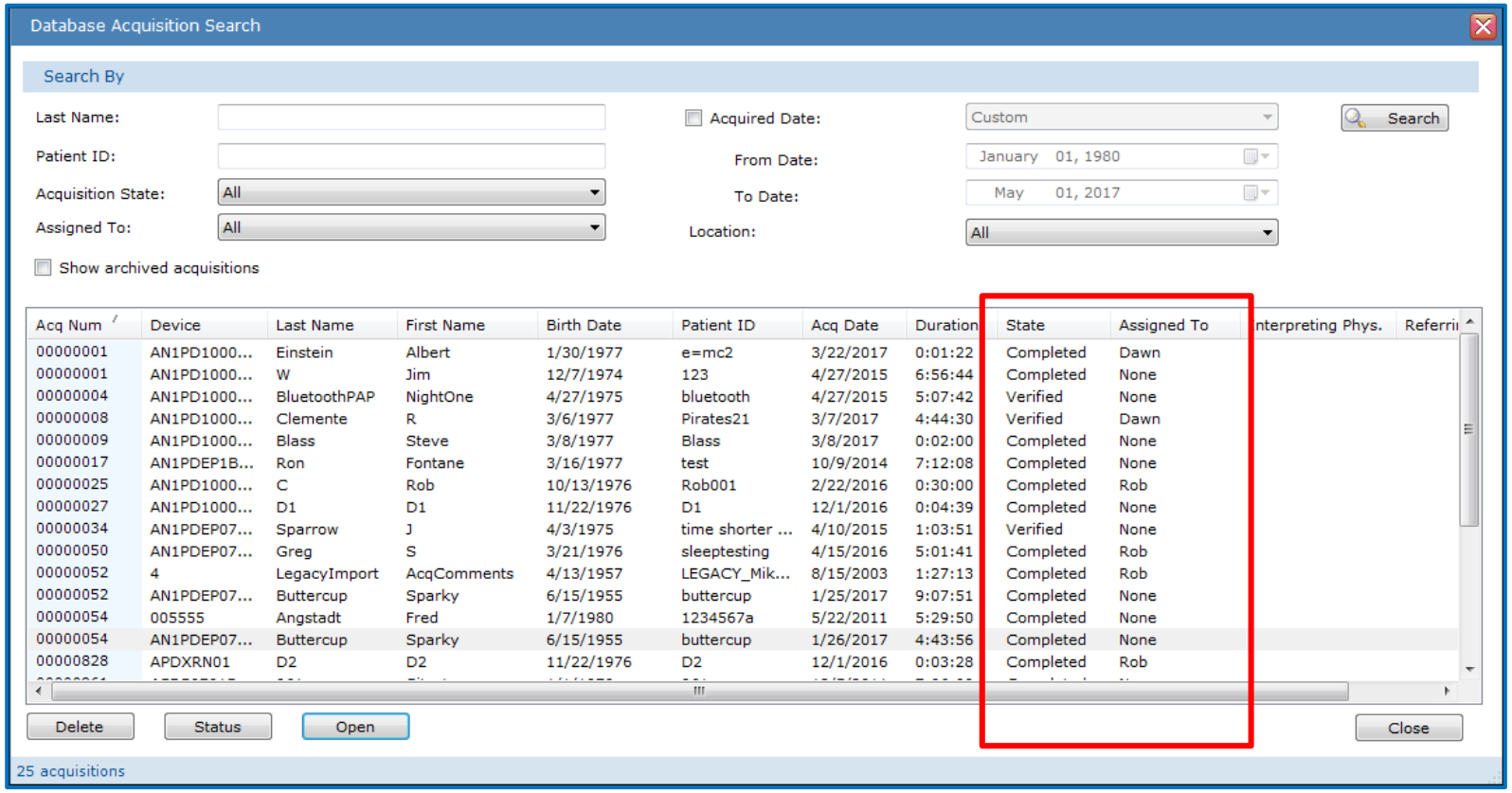
PHILIPS

Tip:
Changing the state and user assignment of multiple studies at once

PHILIPS



To remove patients from the Device and Patient Workflow Dashboard Start Page and remove patients from a user's "My Acquisitions" list, you must mark the study status as Completed and change the User Assignment to None. It is possible to change these items for multiple studies through the Database Acquisition Search Utility. To access, select the Search folder on the Sleepware G3 toolbar.



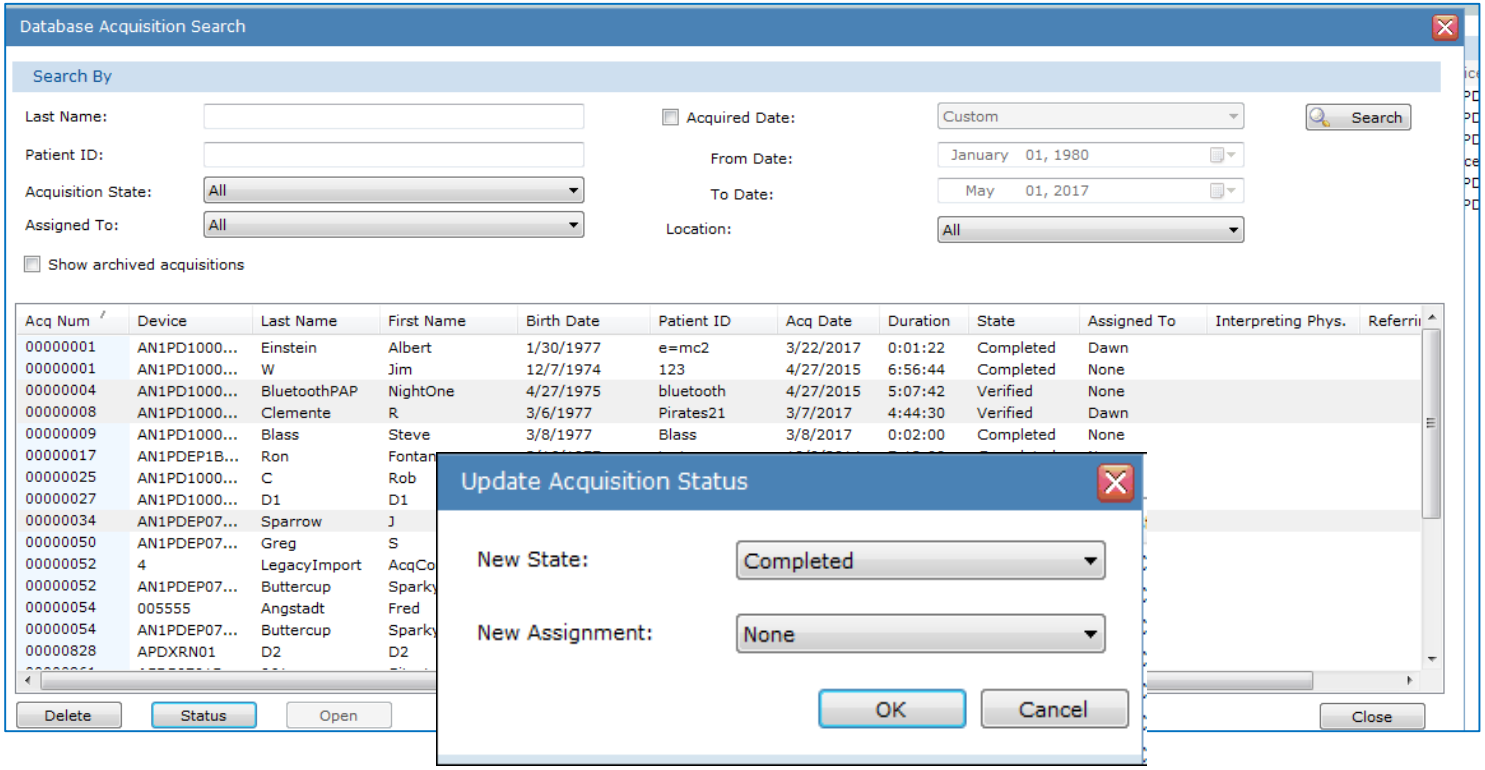
**Note: It is recommended that studies be removed from the Patient and Device Dashboard Workflow Start Page and the My Acquisitions List (by assigning to None) as they are completed so that Sleepware G3 performs optimally and is not bogged down by loading excess study data.

PHILIPS

Changing Study Status to “Completed” and “Assignment” to None for Multiple Studies

Select all of the studies whose status you would like to change by left-clicking on the first one on the list to highlight it, and then holding the **Ctrl** key down as you select others.

Next, click on the Status button at the bottom of the page; choose the Completed status from the drop-down for New State, and None from the drop-down for New Assignment. Select OK to execute the change. This action will remove all of the selected studies from the dashboard and from the My Acquisitions list for selected users.

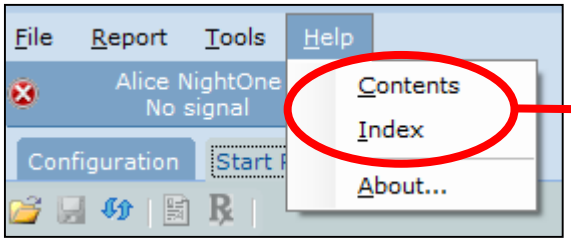


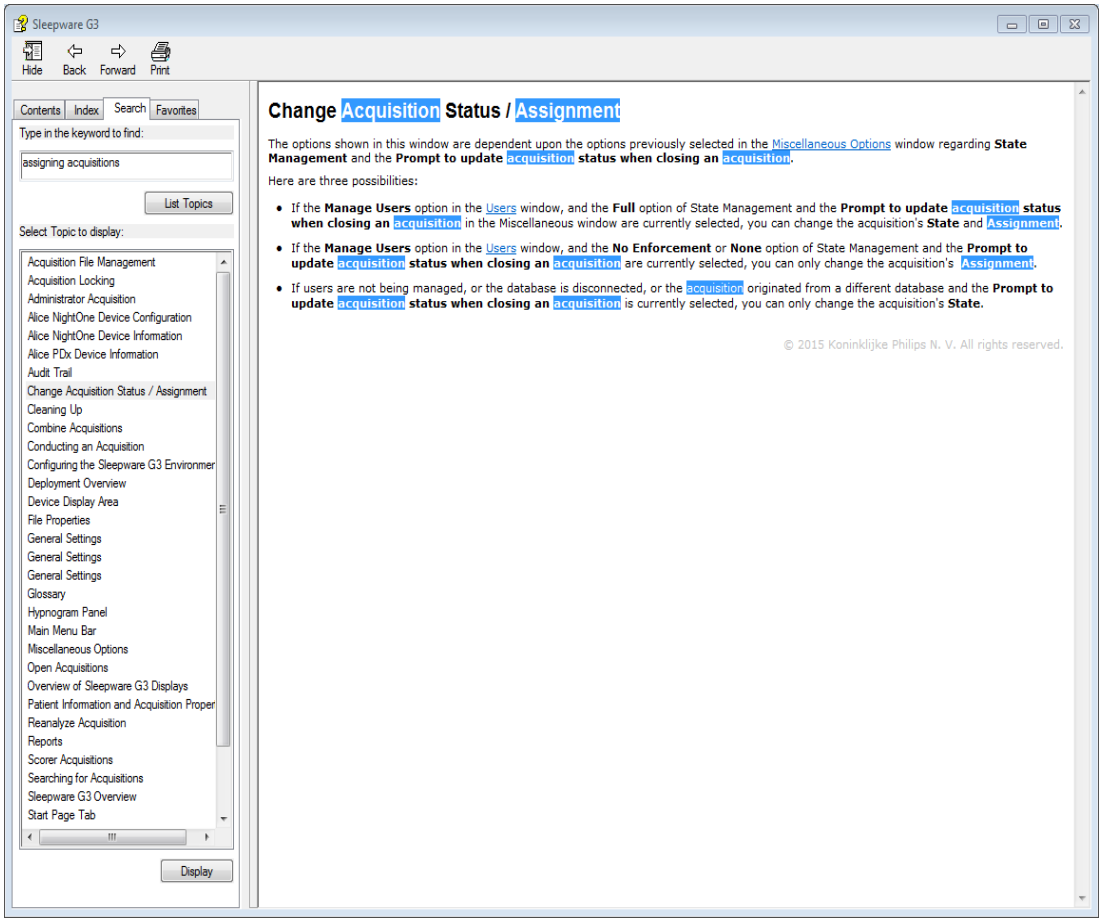
**Note: It is recommended that studies be removed from the Patient and Device Dashboard Workflow Start Page as they are completed so that Sleepware G3 performs optimally and is not bogged down by loading excess data. If you wish to avoid managing patients on the dashboard altogether, you must select “None” under the General tab when adding a patient to Sleepware G3. (From the main toolbar select Tools > Patient List > Add > General.)

PHILIPS

Help!

For more information about Sleepware G3, you can access the online Help by selecting **Help** in the upper-right-end of the main menu bar and selecting **Contents** or **Index**. **OR…** just press **F1** on your computer keyboard to display the online Help.





Thank You

Note: Screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Disclaimer: Screenshots may change based on software version.

Consult Sleepware G3's online help for additional information.

1133364 R00
RPM 5/15/2017

Creating an acquisition using Alice 6 and Sleepware G3

innovation you

PHILIPS

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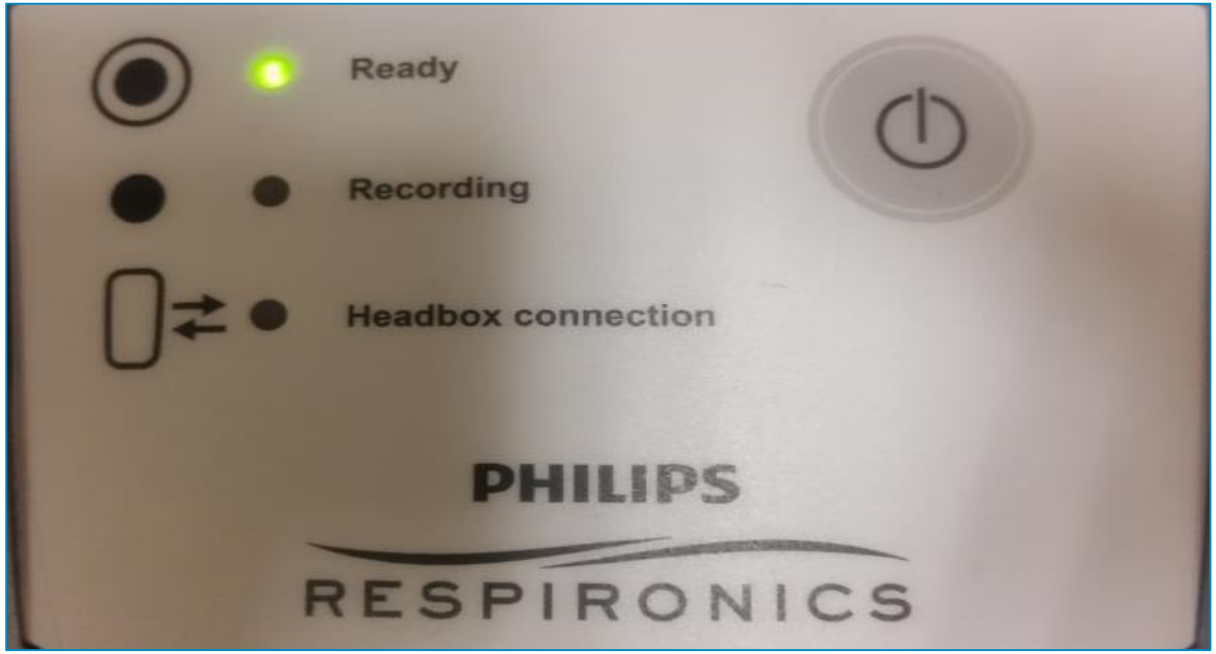
Objectives
Show how to:

- Start an Acquisition
- Check for equipment readiness
- Record video
- Use audio
- Enter patient data into Sleepware G3
- Select the configuration for recording
- Perform Bio calibrations, impedance checks and machine calibrations
- Apply lights off/lights on
- Change high pass and low pass filters
- Apply the QRS filter
- Change gain

PHILIPS

Before Beginning the Acquisition

- Before starting the acquisition recording, verify that all the necessary cables and auxiliary equipment are attached securely to the appropriate ports on the rear of the Alice 6/Alice LDE Base Station.
- The green **Ready** light should be visible on the base station in the patient room.



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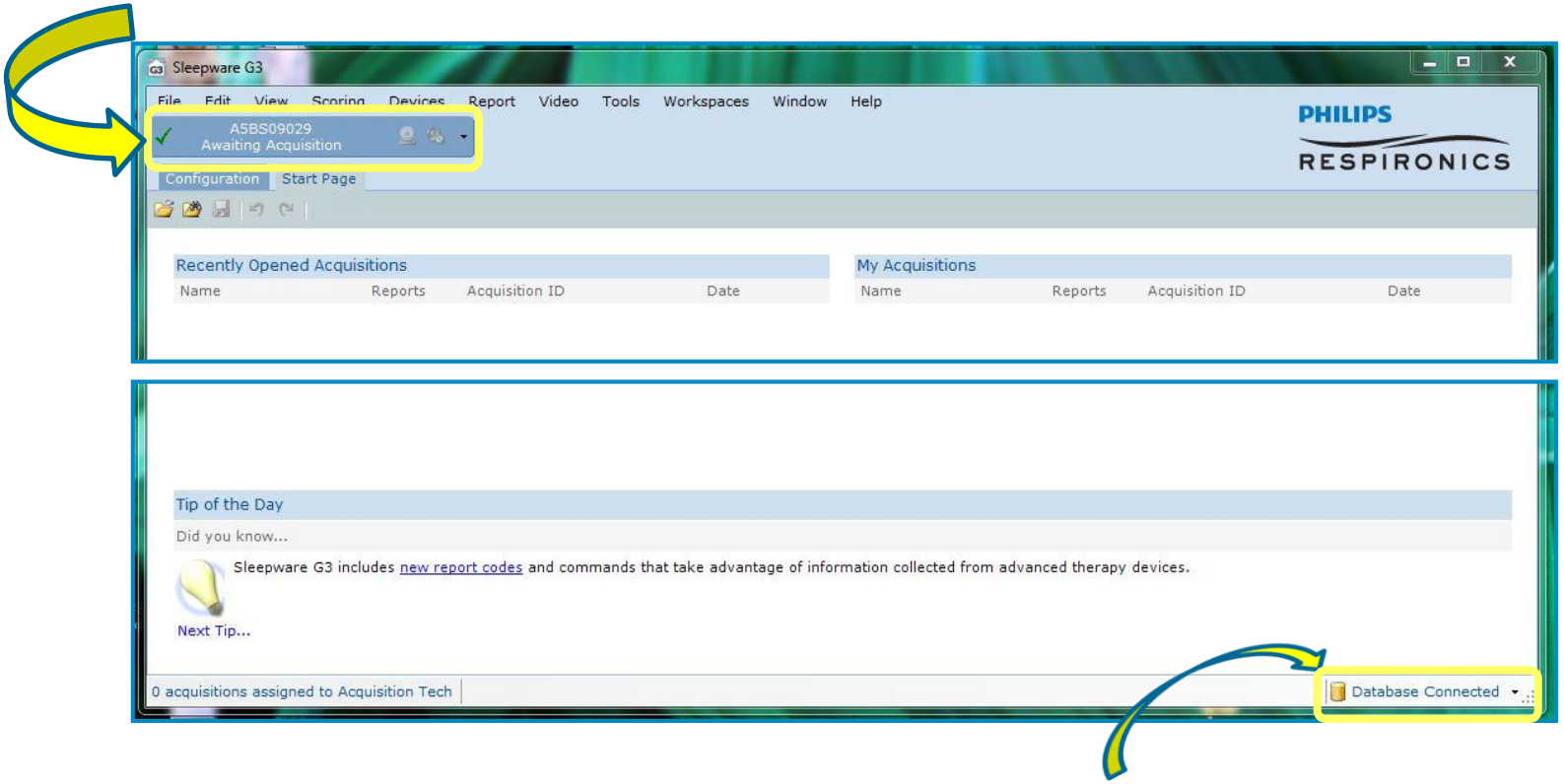
You should see the device in the **Device Display Area** (Starter Bar) with a status of "*Awaiting Acquisition*."



Check that the database is connected.

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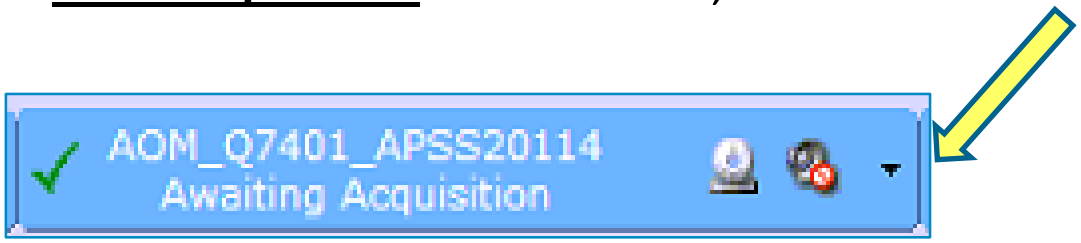
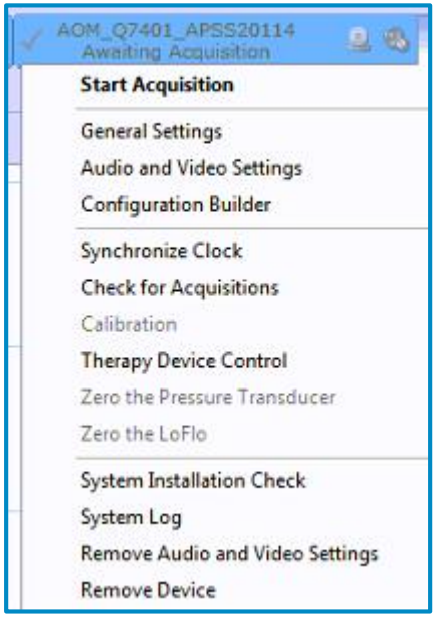
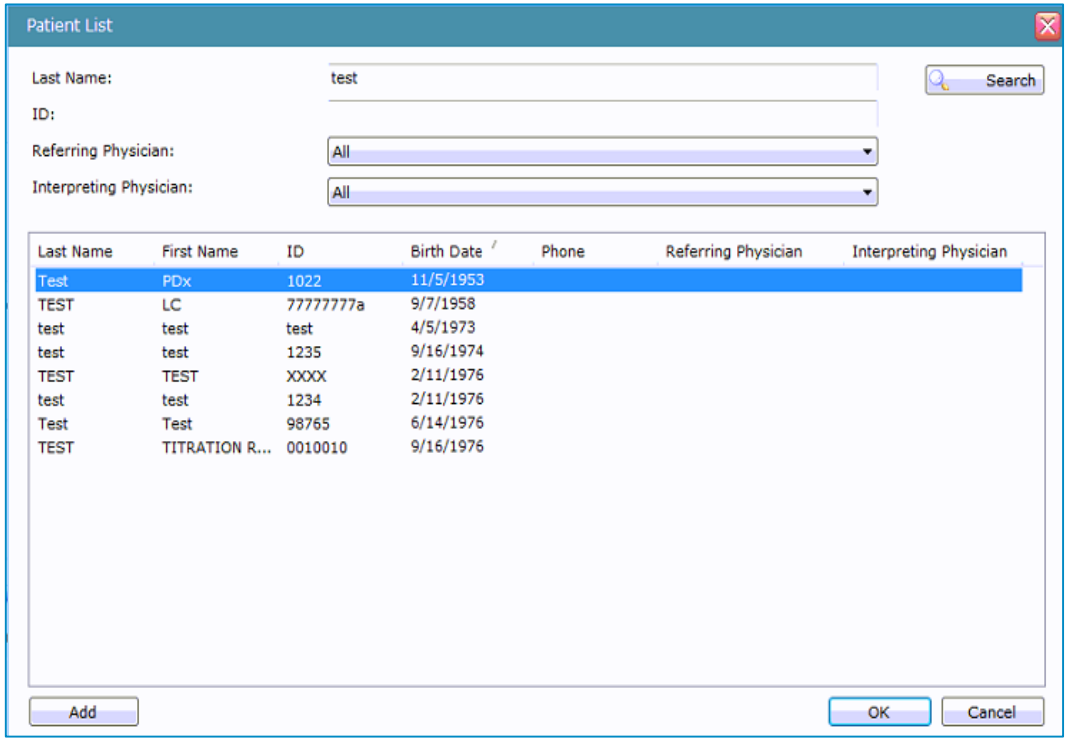
Click on the Starter Bar drop-down arrow located on the right side and select **Start Acquisition** from that list, or left-click on Awaiting Acquisition.



The **Patient List** window is displayed.





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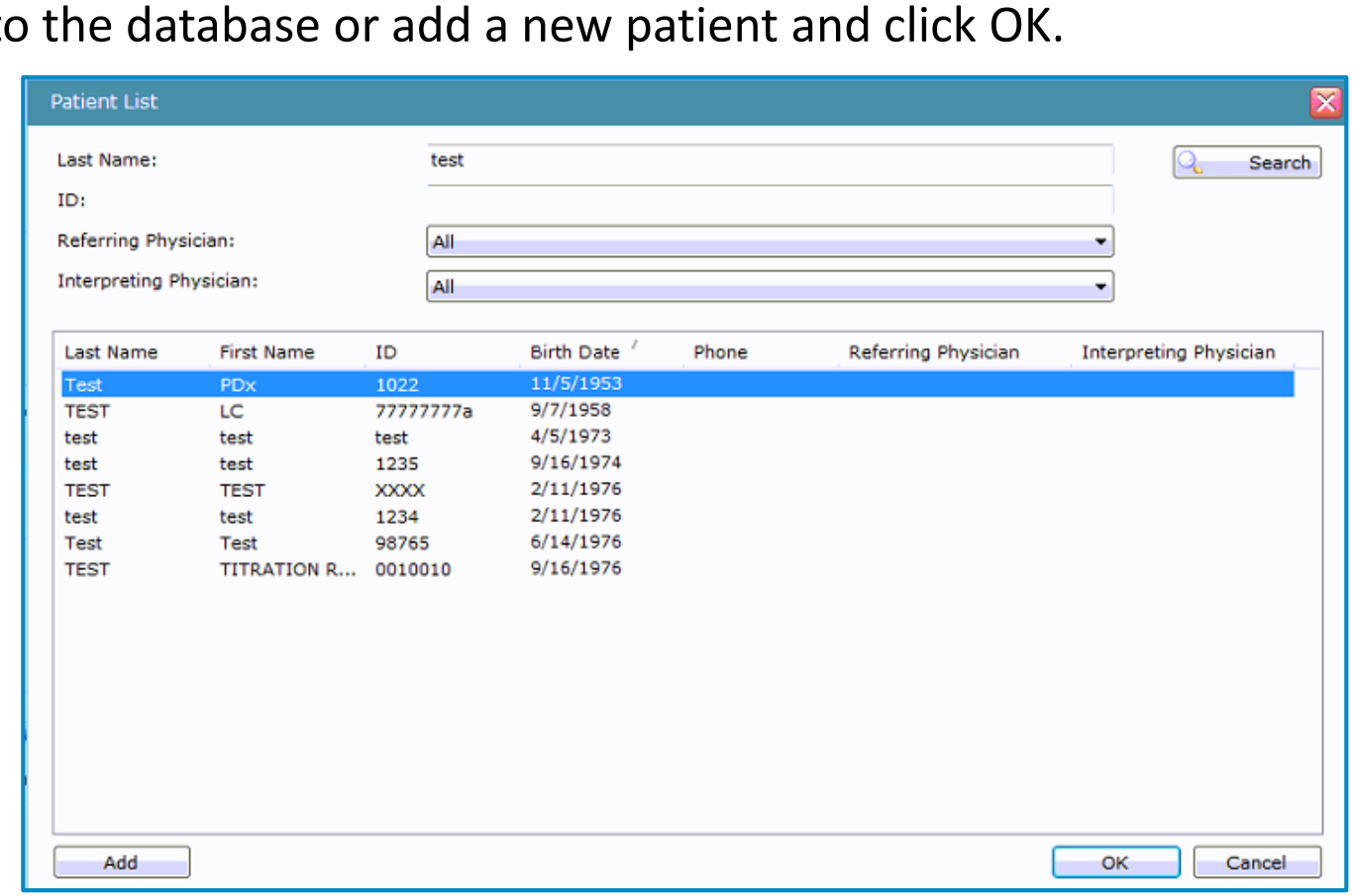
Searching and Adding Patients

To add the patient information for the acquisition you are about to start, you will select from the patient list. Search for a patient who was previously added to the database or add a new patient and click OK.

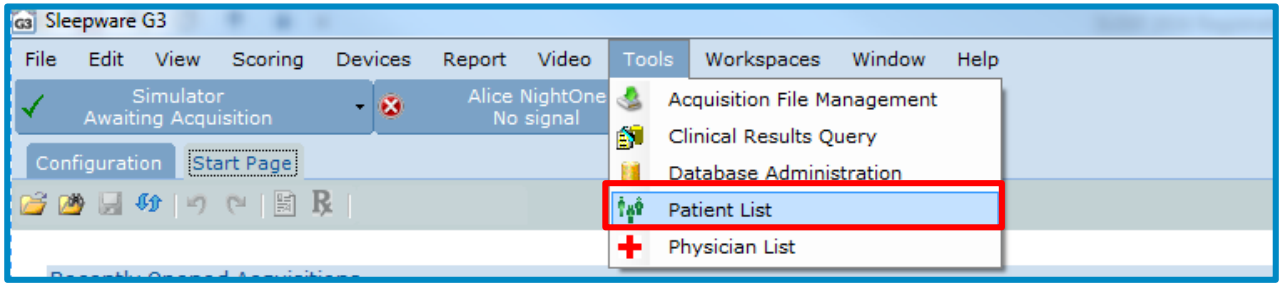


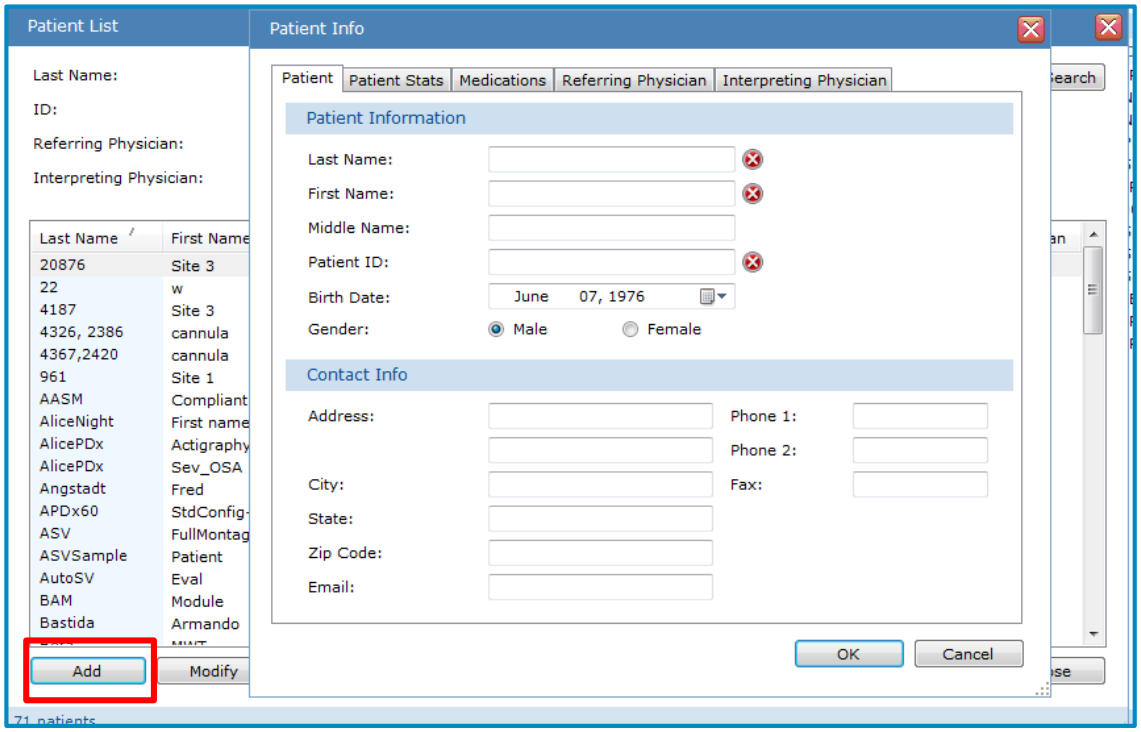
To add a new patient to Sleepware G3, select the **Add** button in the bottom-left corner.

PHILIPS

It is possible to add all patients to the database at any time prior to their study.

From the Sleepware G3 toolbar, select Tools > Patient List > Add





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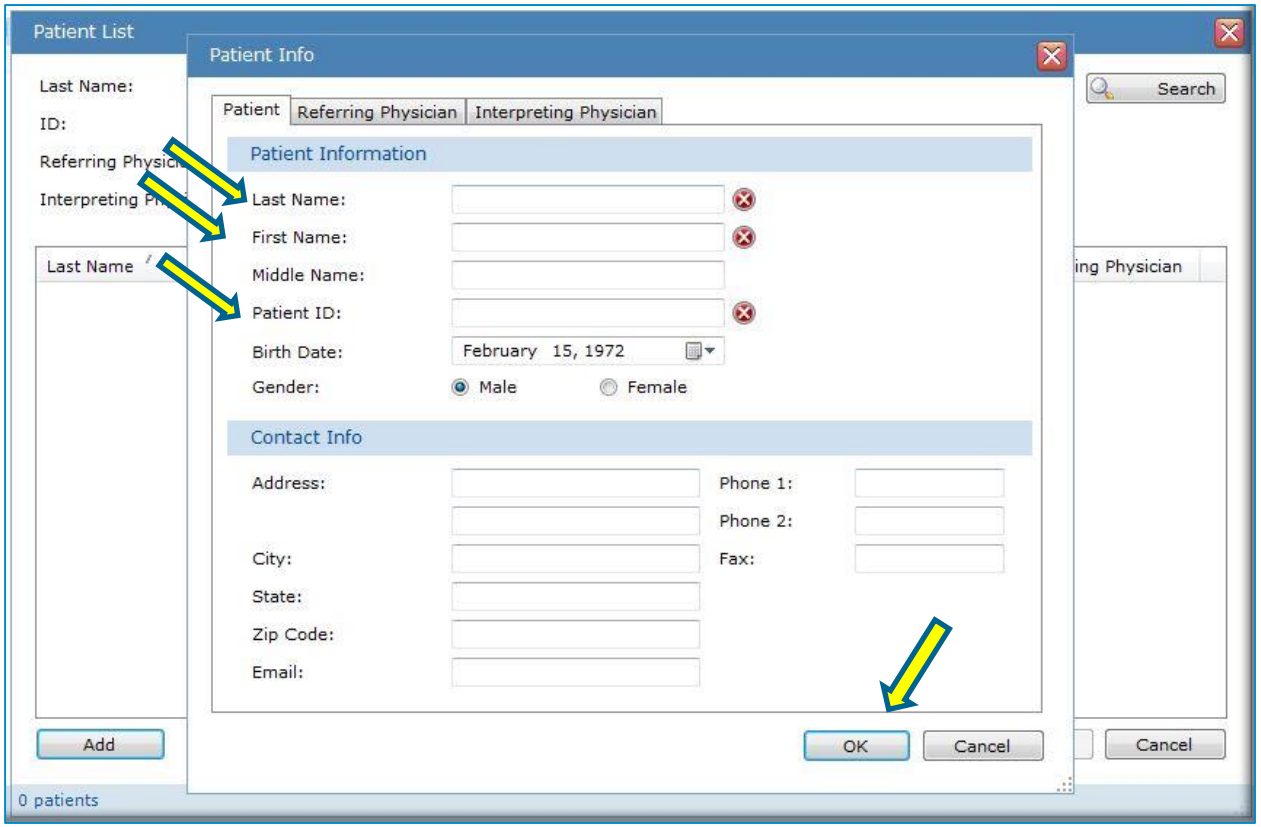
- Fill in at least these three required fields indicated by the ⊗ icon.
- The **patient ID** must be unique and contain at least four characters.
- The other fields can be filled in during the acquisition or at a later time.



Once you have entered all necessary patient information, click OK.

PHILIPS

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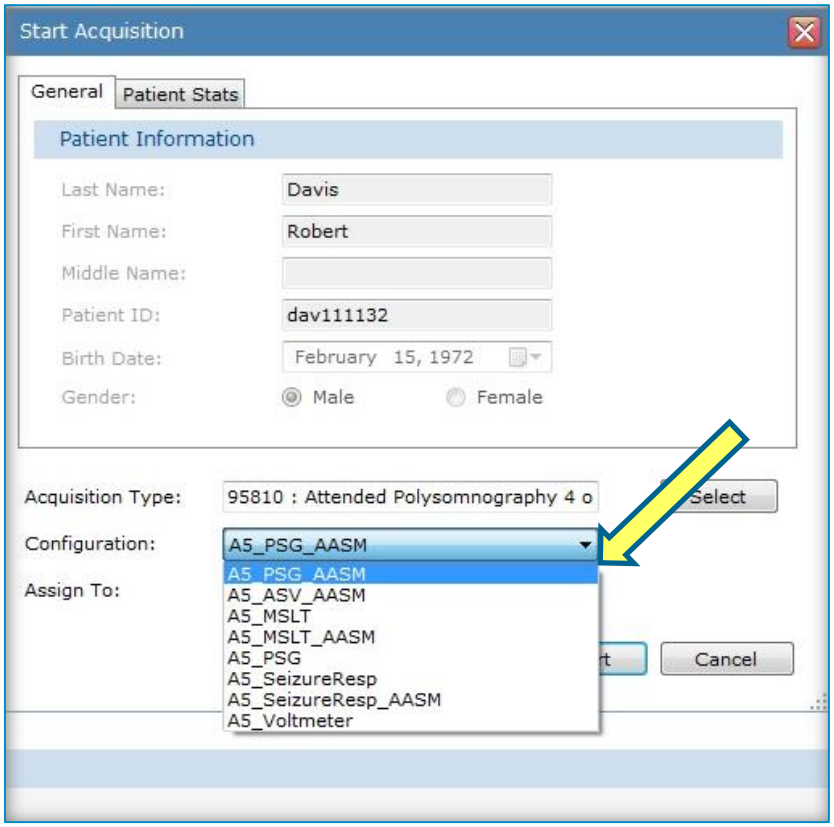
Once OK is selected, the **Start Acquisition** window is displayed.



This window allows you to select the configuration for the acquisition type you will collect.

To select the configuration, click on the Configuration drop-down arrow.

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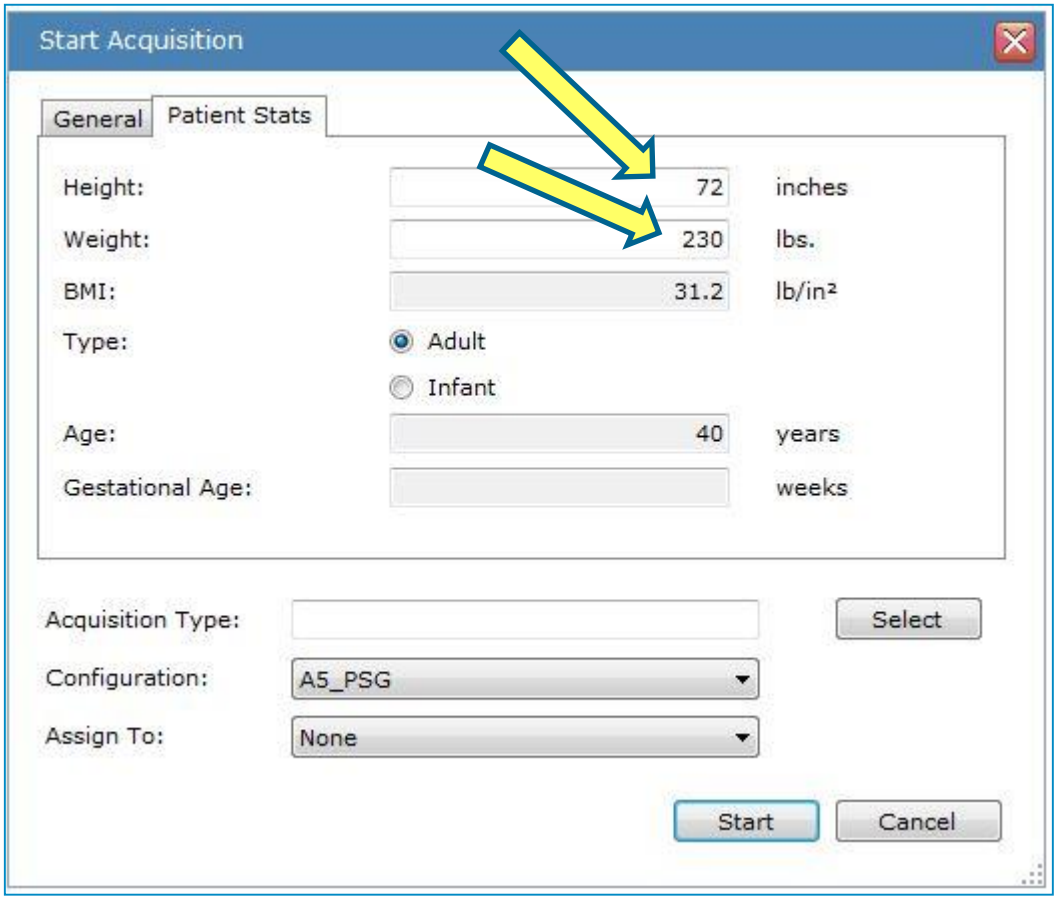


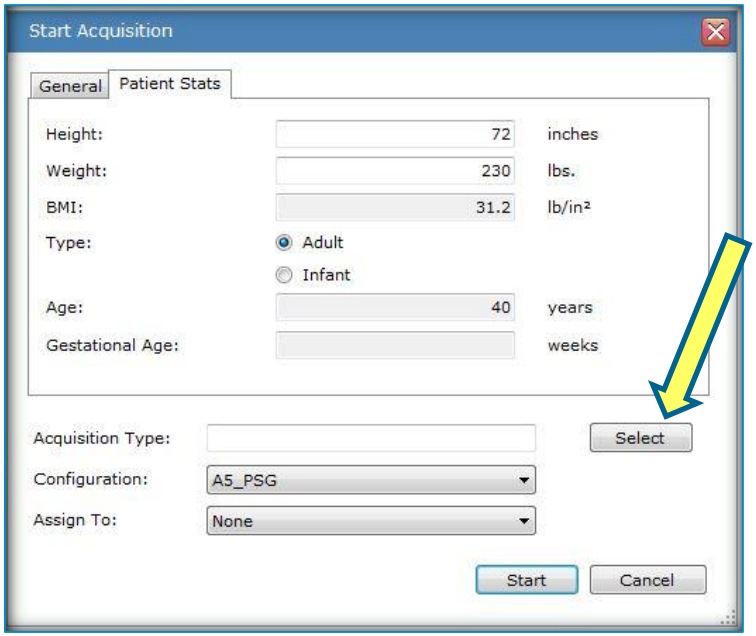
Next you can fill in **height and weight.**

BMI is automatically calculated.

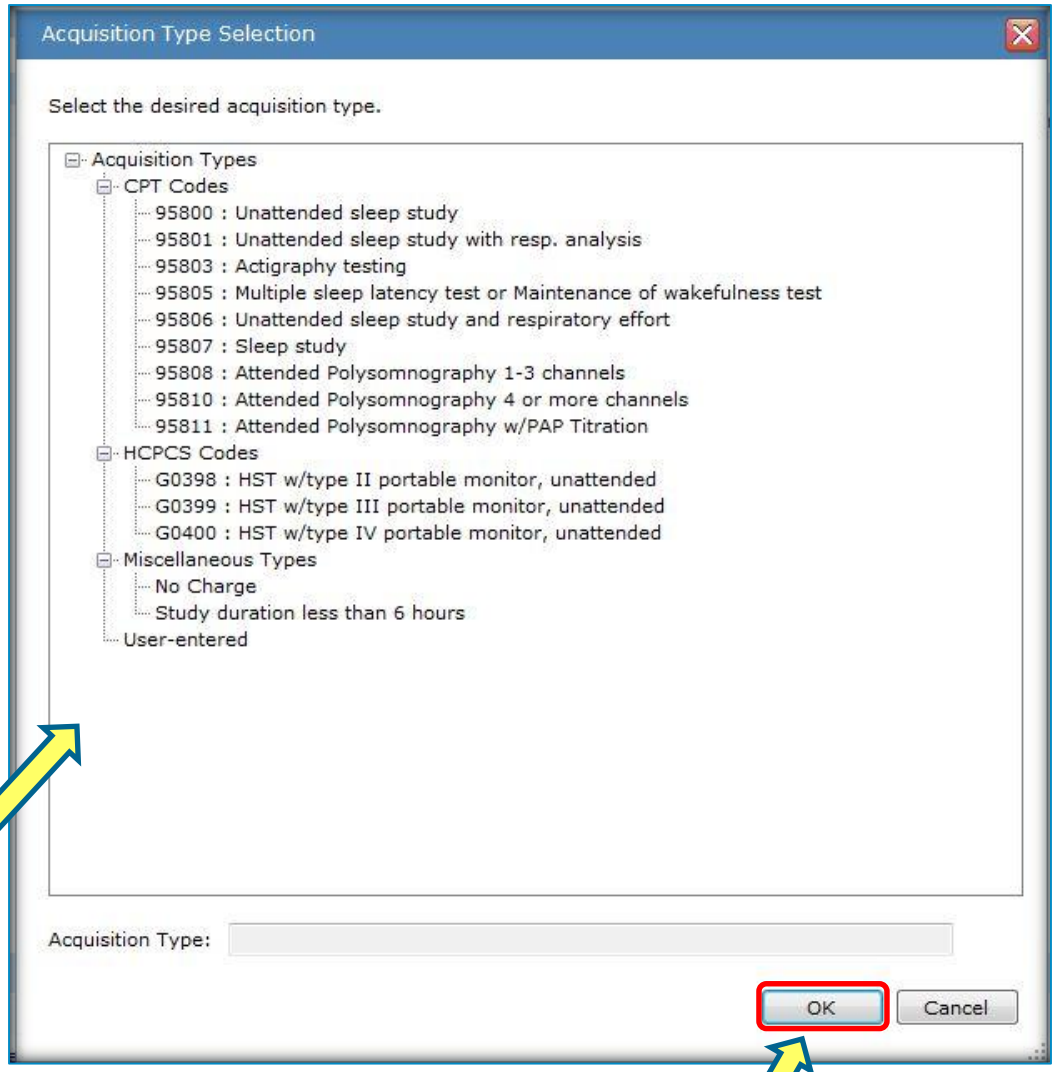
Gestational Age is completed for Infant studies.

PHILIPS

You have the option to select the **Acquisition Type**.



Click **Select** and the **Acquisition Type Selection** window appears.



Choose the **Acquisition Type** then click **OK.**

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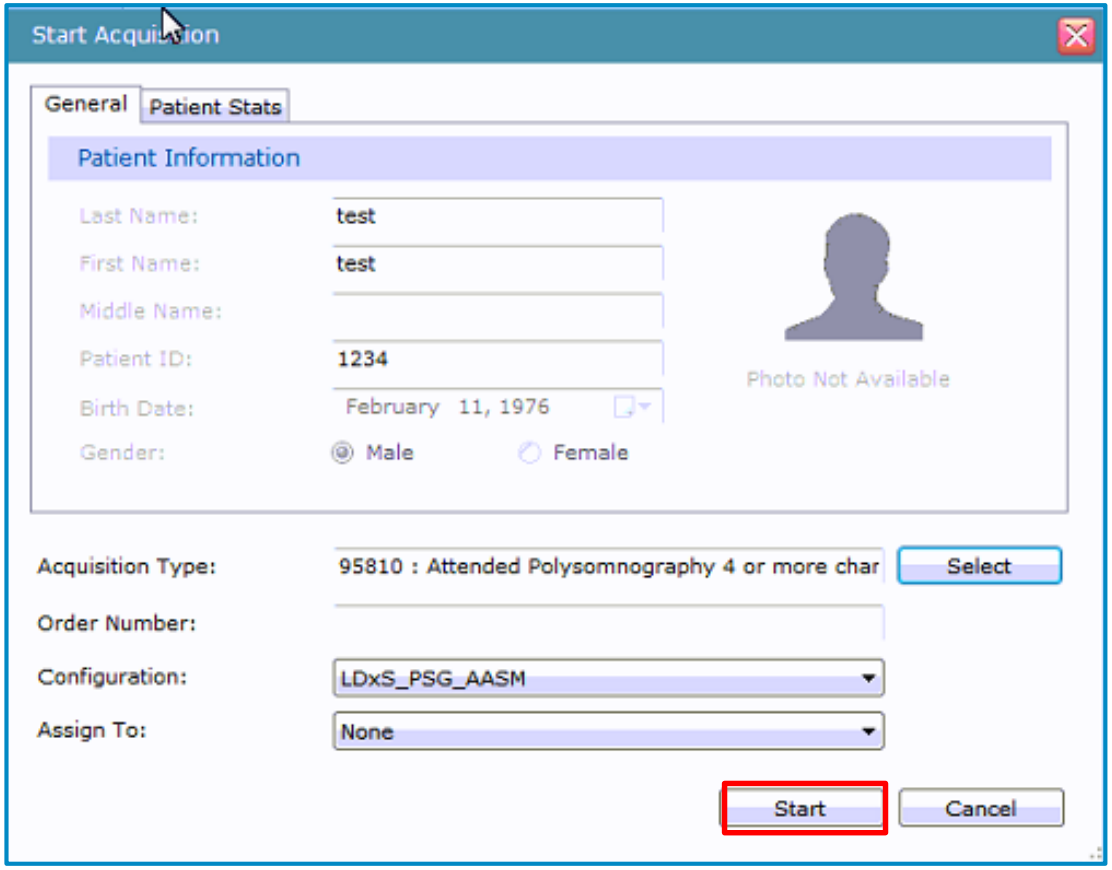
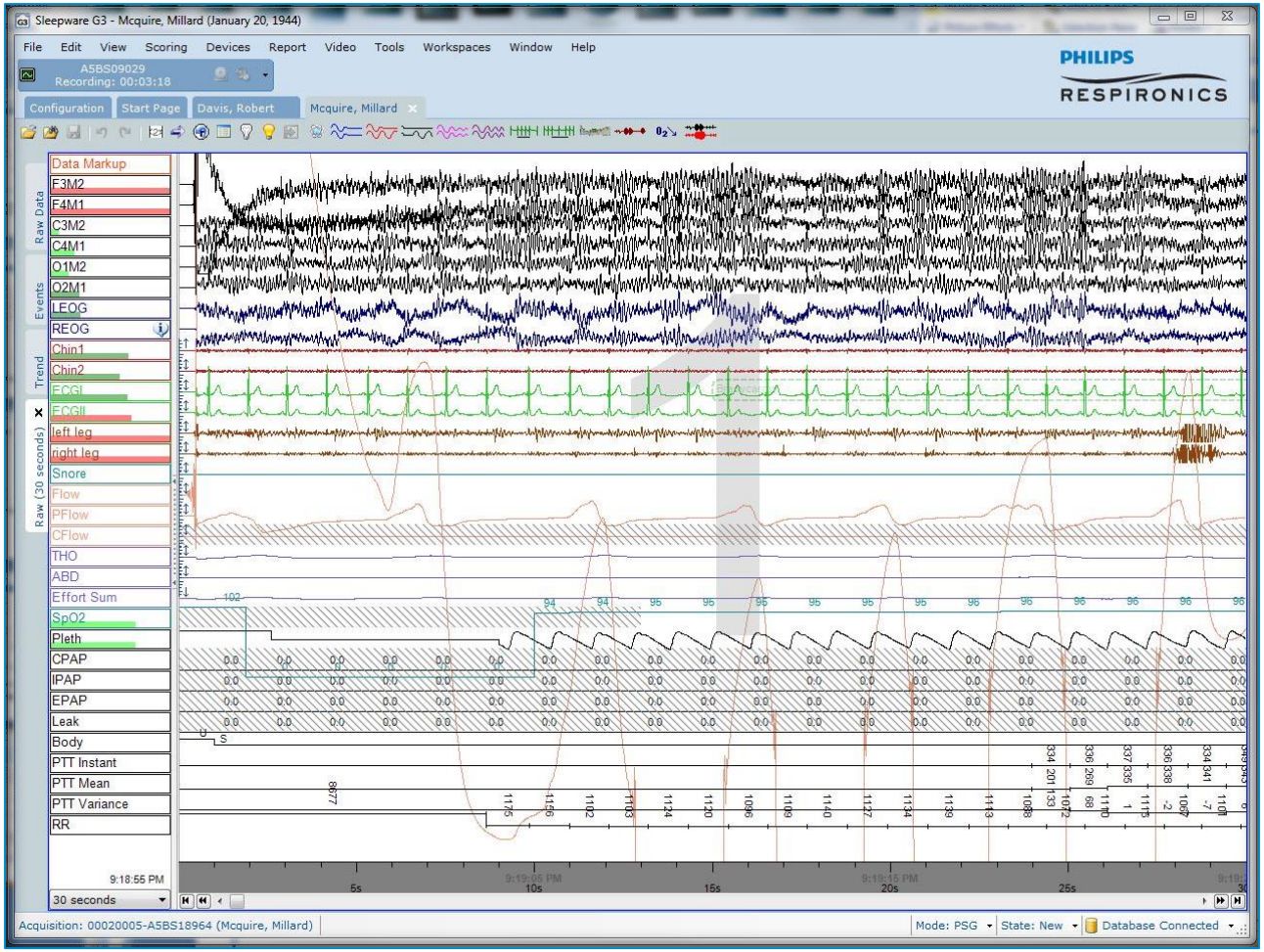


You can now click Start to begin acquiring the study.

PHILIPS

This window, showing the first epoch, could take <u>up to 20 seconds</u> to appear.



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If this error occurs …

… go connect the headbox and <u>restart the acquisition</u>

PHILIPS

Video

To view the video, click on the video icon on the starter bar.
This feature is available anytime.

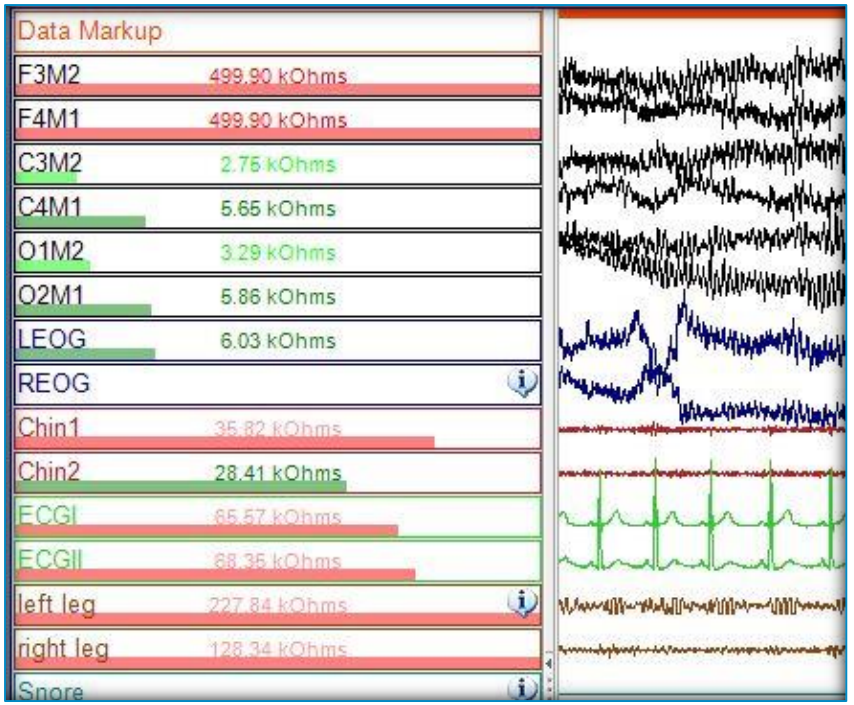
The video recording automatically begins, once the acquisition is started.

PHILIPS

Impedance

Select **View > Impedance Values** from the main menu bar. You can display the actual impedance values in the channel label. Note that the values are based on the currently selected time scale.

A red tab on the **Channel Label** indicates a high impedance value, a darker green tab indicates moderate impedances, and a light green tab indicates low impedance. This is shown throughout the recording. Numeric impedance values can be selected at any time during or post acquisition.



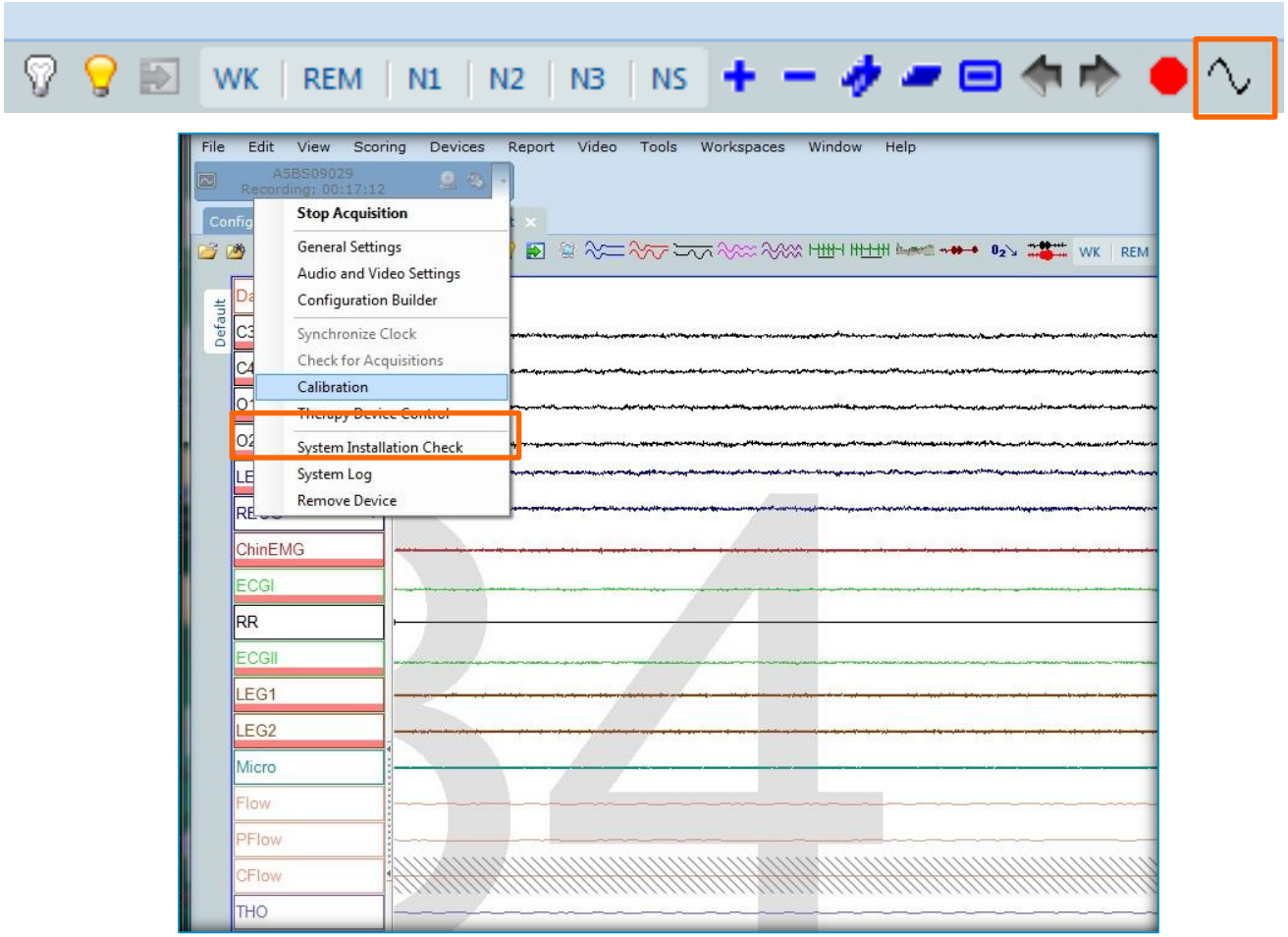
The configured thresholds define three levels of impedance quality:

Level	Channel Label Color Code	Condition	Meaning
LOW	Light green	Value less than or equal to low threshold	The impedance is considered to be of good quality
MEDIUM	Dark green	Value is between low and high thresholds	The impedance is considered to be of medium quality
HIGH	Red	Value is greater than or equal to threshold	The impedance is considered to be of bad quality

PHILIPS

PHILIPS

MACHINE CALIBRATIONS



To start machine calibrations, click on the device drop-down menu and select Calibration or select the calibration waveform icon from the toolbar. A calibration signal begins to scroll and automatically continues for a maximum of 60 seconds. You can stop the calibration manually at any time. To manually stop it, access the drop-down menu again and select Calibration. Once the device calibration ends, the signals will once again display the patient's waveforms.

PHILIPS

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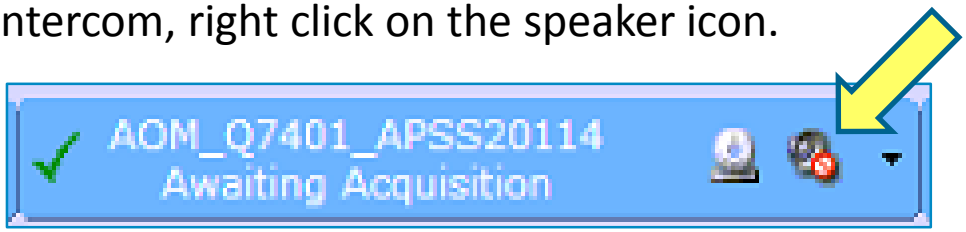
Intercom Icon

G3 is equipped with voice over IP (VoIP) intercom capabilities.

This speaker icon is used to enable/disable the intercom and is also used to invoke the intercom 'push to talk' function. When the intercom is disabled, the speaker icon will display a red circle with an X beneath it, as shown below. To enable the intercom, right click on the speaker icon.



When the intercom is enabled, the red circle/slash is removed, and the speaker icon will show, as pictured below.

A left click on the speaker icon invokes the 'push to talk' function. Continue to **HOLD the left mouse button** when you are talking to keep the microphone engaged. When 'push to talk' is activated, the speaker symbol changes to a microphone. **Releasing the left mouse button stops the 'push to talk' function**.

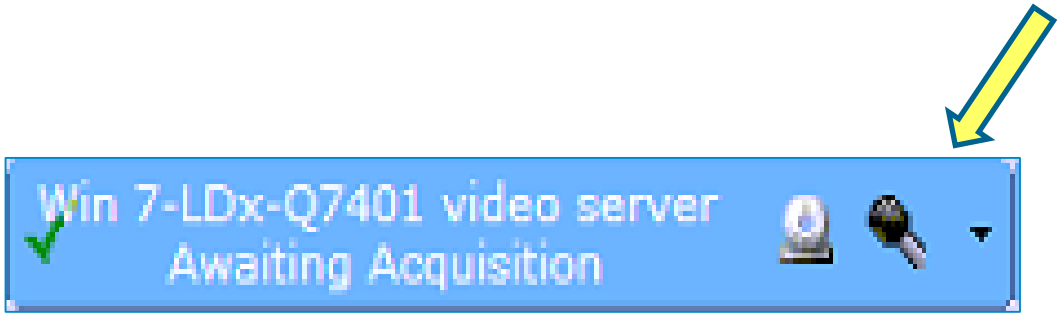
speaker enabled

microphone enabled

PHILIPS

PHILIPS

Locking the Microphone

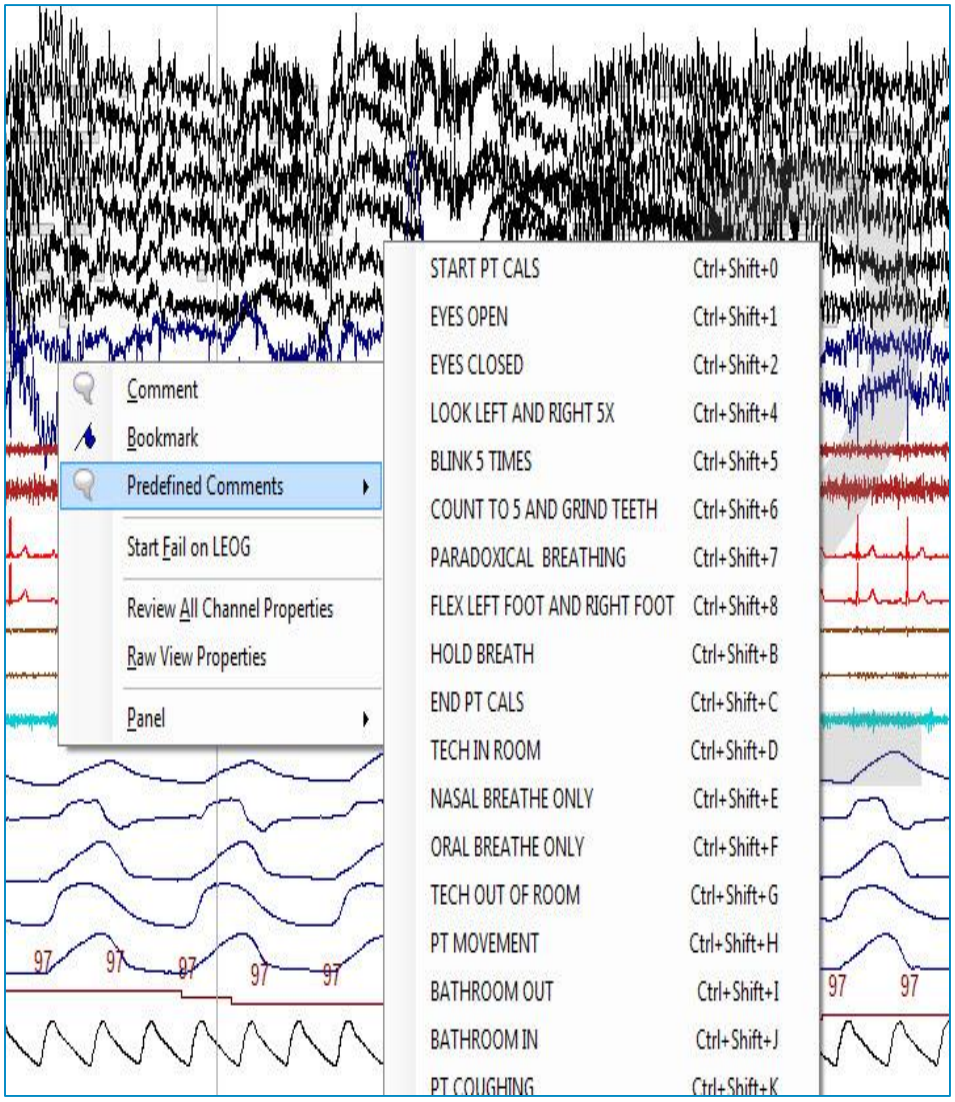


It is possible to lock the intercom on the microphone position by left clicking and dragging the mouse cursor off of the microphone. Engaging the microphone is helpful during times where you will speak extensively to the patient, such as during bio-calibrations. Always remember to disengage this feature, as the patient will hear you in the control room and you will not hear them. To disengage the microphone from the lock position, left click on the microphone.

PHILIPS

PHILIPS

BIO-CALIBRATIONS



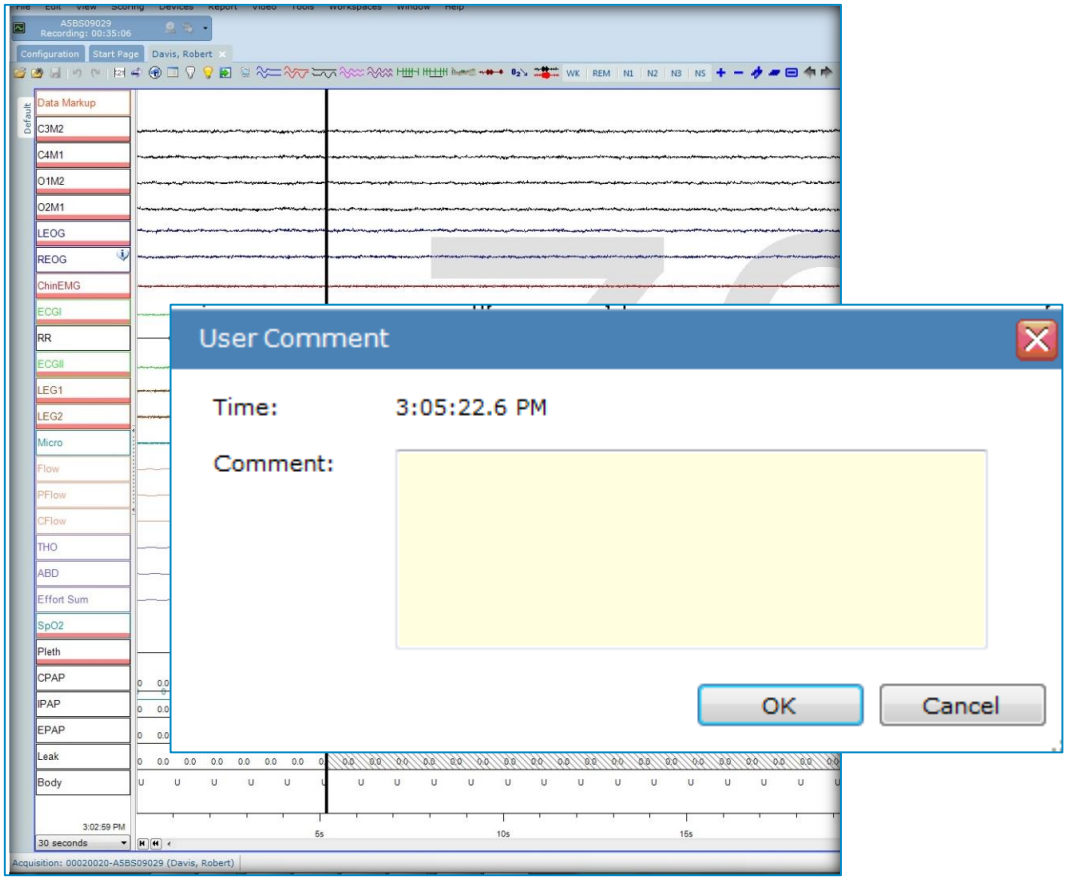
To insert comments for patient bio-calibrations:

1. Right click on-screen.
2. Choose Predefined Comments.
3. Select the appropriate action.

PHILIPS

PHILIPS

Entering a comment manually



Alternatively, you can press the ‘space bar’ and the User Comment window appears. Type in the comment you wish to enter and select OK.

PHILIPS

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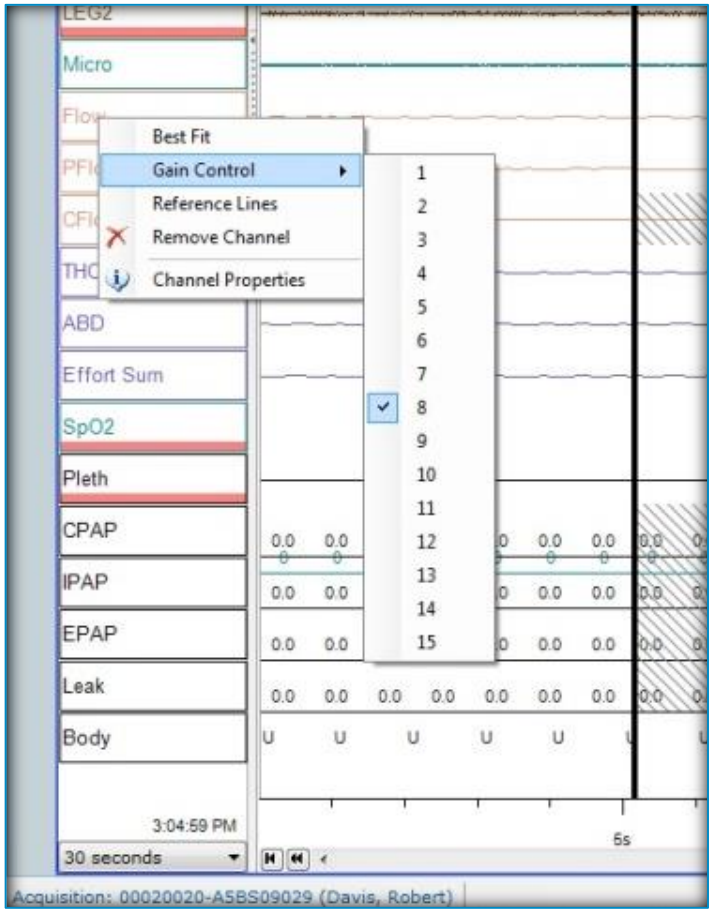
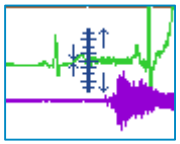
Gain Changes



To Change <u>Gain</u> [CHIN and LEG EMGs, ECGs, FLOW SENSORS (Thermal, Pressure, & CPAP) and RESPIRATORY EFFORT]:

Change the detail of the signal and amplitude during the acquisition by right clicking on the channel label: click on gain control and select a number (1-15).

A mark appears in the raw data indicating the beginning of the gain change. This Gain control change is a **permanent** change to the recording.

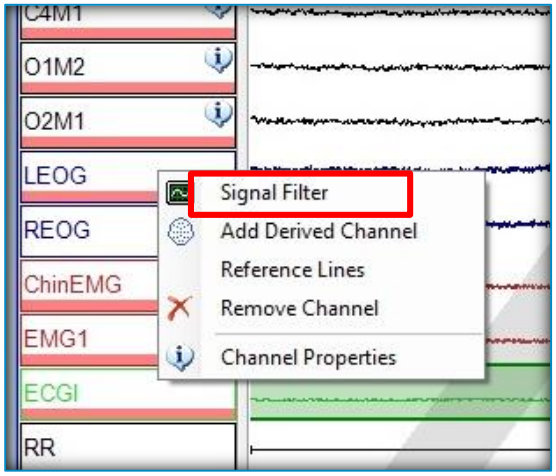


A gain change scale icon is shown on the raw view screen to indicate when the change was made and a gain change comment appears on the event list.

*Note: A gain change during an acquisition will result in a permanent change to the amplitude of the channel, meaning the scoring tech and physician reviewing a study post-acquisition can visualize this amplitude change. If the acquiring tech uses the zoom function instead (+ or (-) key) to change the amplitude, this adjustment is only temporary, requiring the scorer and physician to use the zoom function as well. It is recommended to use gain during data collection. The gain on a channel cannot be changed post-acquisition.

PHILIPS

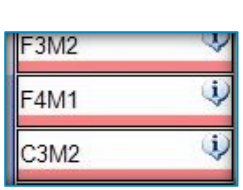
Filters

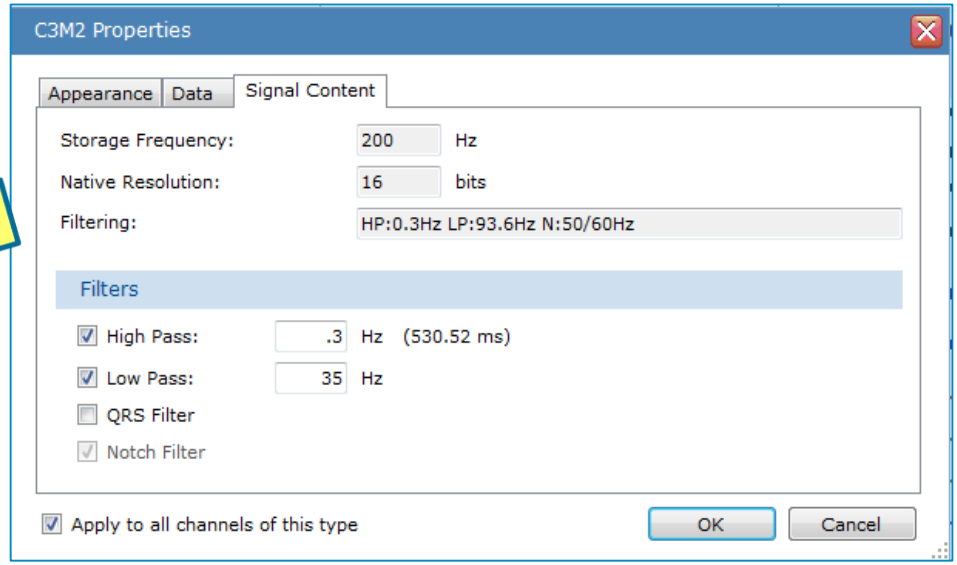


Note: A **high pass** filter is also known as a **low frequency** filter (**LFF**) and a **low pass** filter is also known as a **high frequency** filter (**HFF**). A high-pass filter allows higher frequencies to pass unchanged while attenuating lower frequencies. A low-pass filter allows lower frequencies to pass unchanged while attenuating higher frequencies. Sleepware applies the changes and the window closes. Note that the changes are temporary unless saved to the workspace.

To Filter a channel signal: Place the Cursor on the Channel Label (**EEG, EMG, ECG, SNORE/MIC and EOG**), right click, choose **Signal Filter** and type the new frequency in the corresponding text box (High or Low Pass filter).

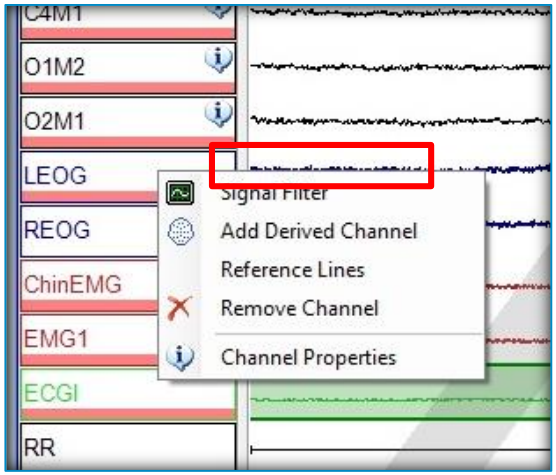
When **Signal Filter** is **ON** (activated), an "i" or information icon is displayed next to the channel label that is being filtered.





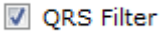
Filter can be applied to all channels for the same type

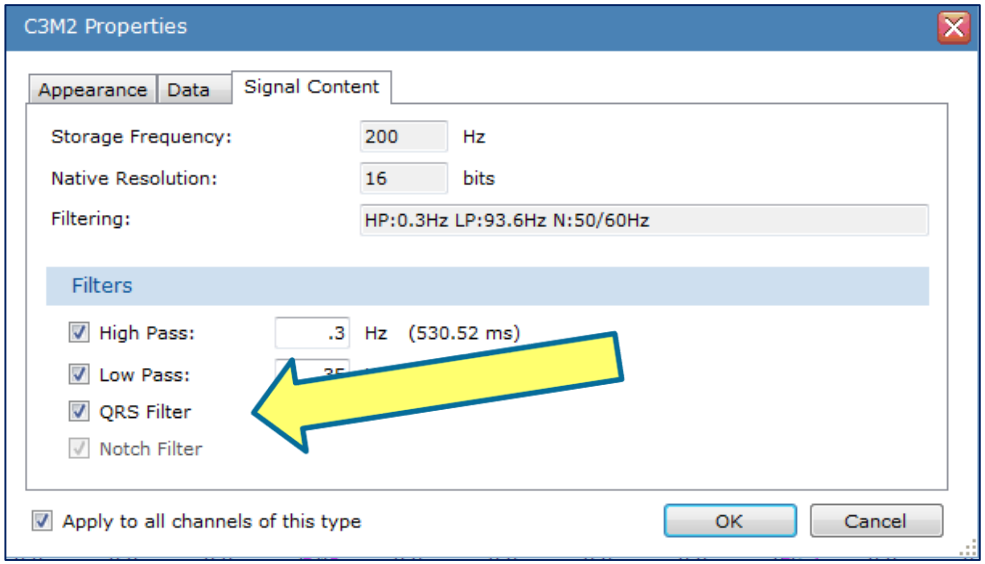
Filter for ECG artifact



Note: If you are experiencing the appearance of QRS-like waveforms corresponding with the ECG signal on one or more channels, the QRS filter can be applied to alleviate this. The QRS filter can be applied to the EEG, EOG, EMG and/or snore channels. Once the setting is selected and applied by selecting OK, the QRS artifact is filtered from the channel.

<u>To apply the QRS filter to a channel:</u> Place the mouse pointer on the Channel Label in which you'd like to apply the filter, right click, choose **Signal Filter** from the drop-down. Place a check mark in the check box for QRS filter.

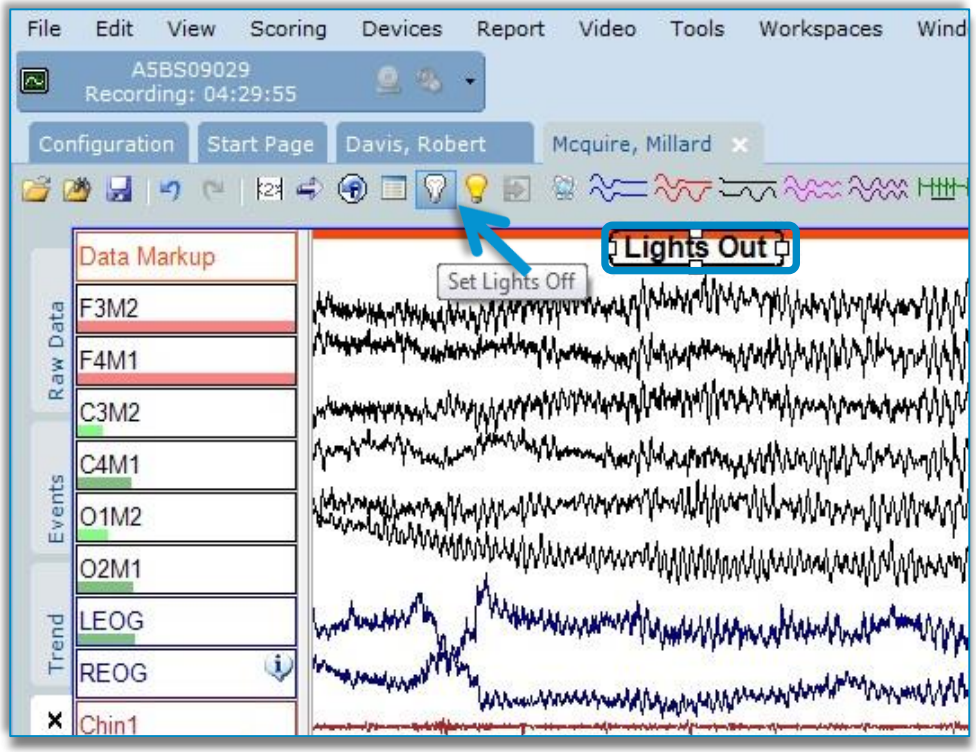




Filter can be applied to all channels fo the same type

PHILIPS

Lights Out



To set **Lights Off** within the study, select the white light bulb icon. It is necessary to use this icon so that Lights Out is stamped to the study. This stamped lights out time will be used as the Lights Out time on the report. Also, if you are scoring on-the-fly or using Somnolyzer scoring, this time stamp will allow for sleep time and event indices to be calculated from this time as it should.

You can also enter a tech comment for Lights Out so that this is marked on the raw view screen where lights out occurred during review.

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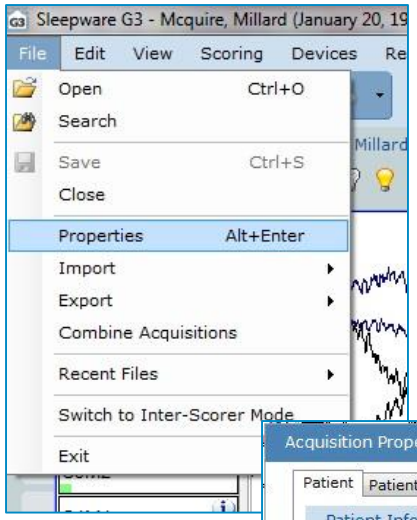
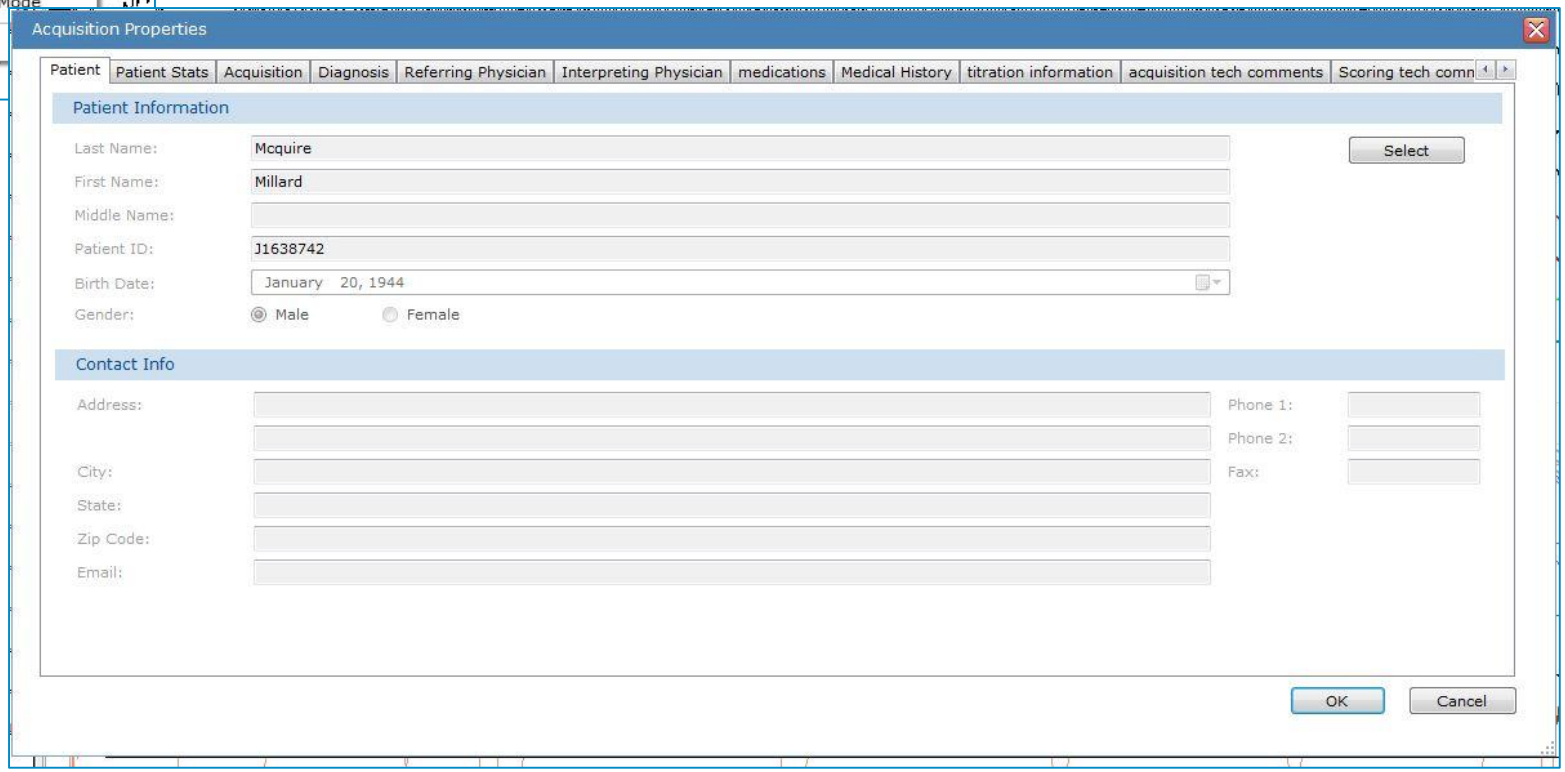
Acquisition Properties



Additional acquisition information regarding the patient can be entered during or post-acquisition



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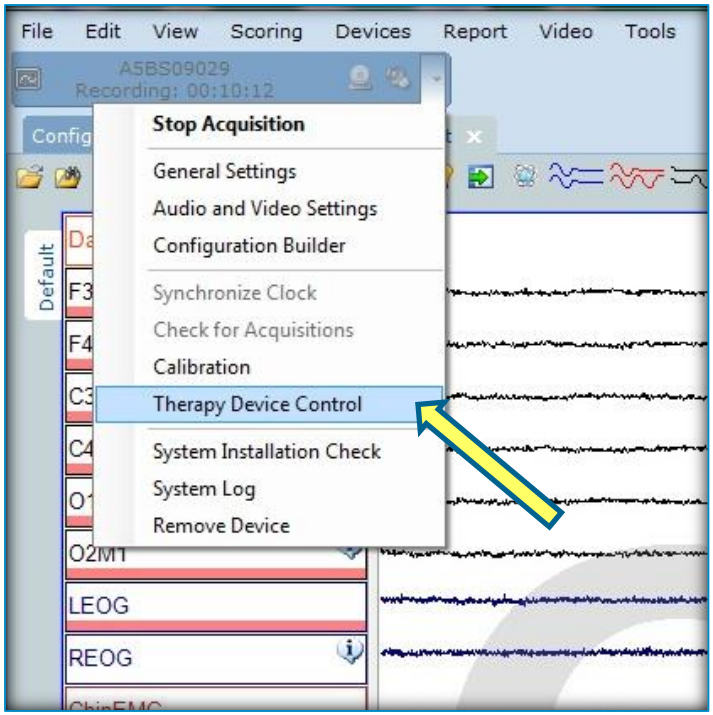
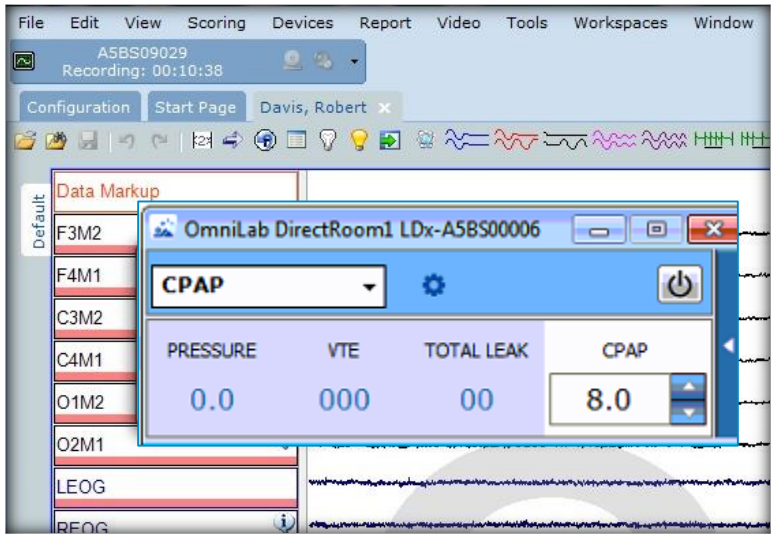
Titration



To initiate PAP therapy, click the drop-down arrow located on the **right** side of the **Starter Bar** and select the **Therapy Device Control** option. This opens the **Omni Direct** screen where you can manage modes/pressures etc.



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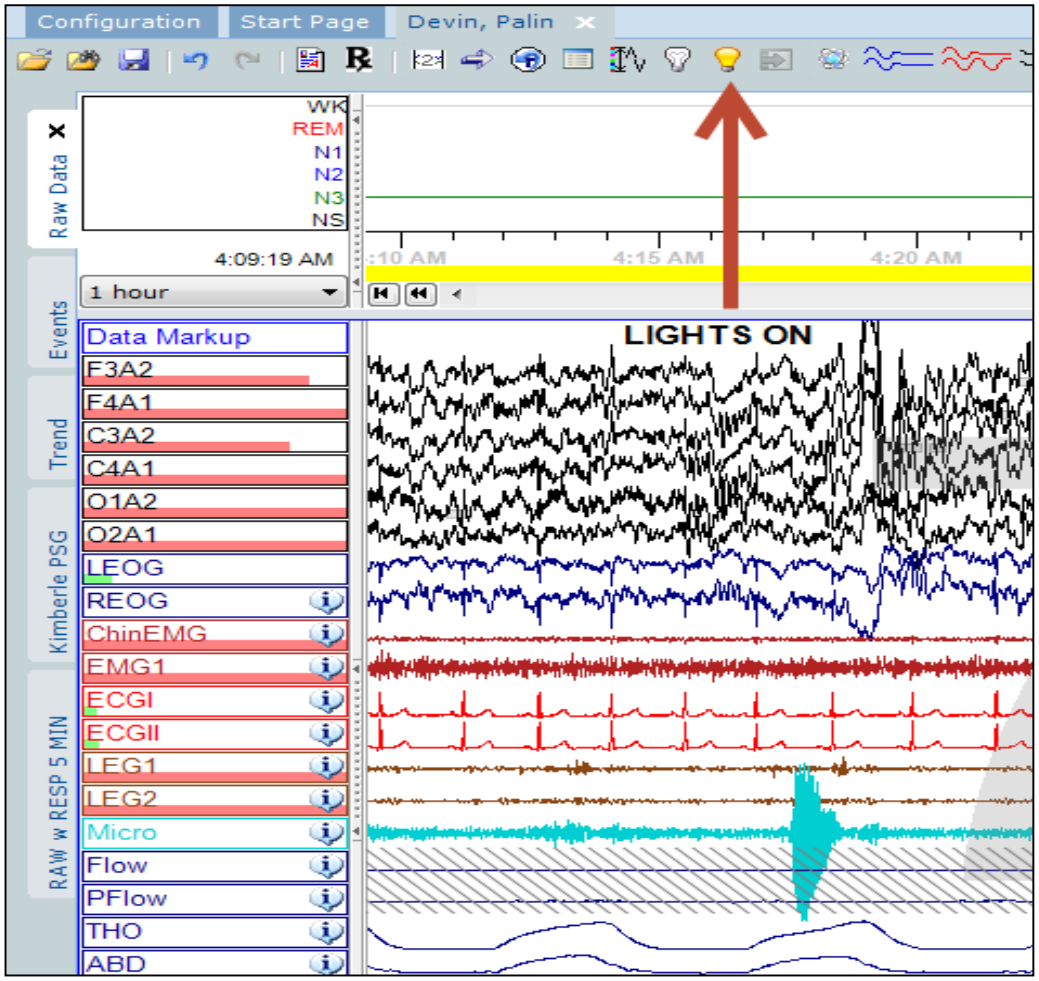
Lights On



To set **Lights On** within the study, select the yellow light bulb icon. It is necessary to use this icon so that Lights On is stamped to the study. This stamped lights on time will be used as the Lights On time on the report. Also, if you are scoring on-the-fly or using Somnolyzer scoring, this time stamp will allow for sleep time and event indices to be calculated from lights off to lights on.

You can also enter a tech comment for Lights On so that this is marked on the raw view screen where lights out occurred during review.

PHILIPS

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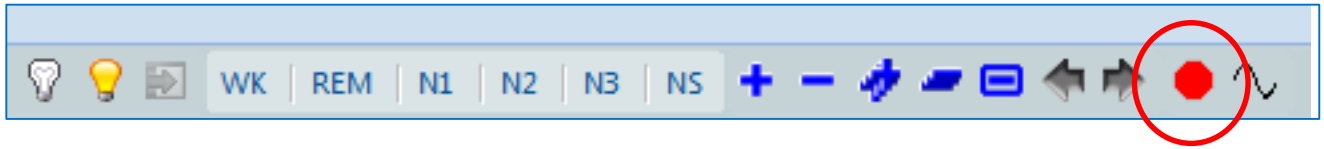
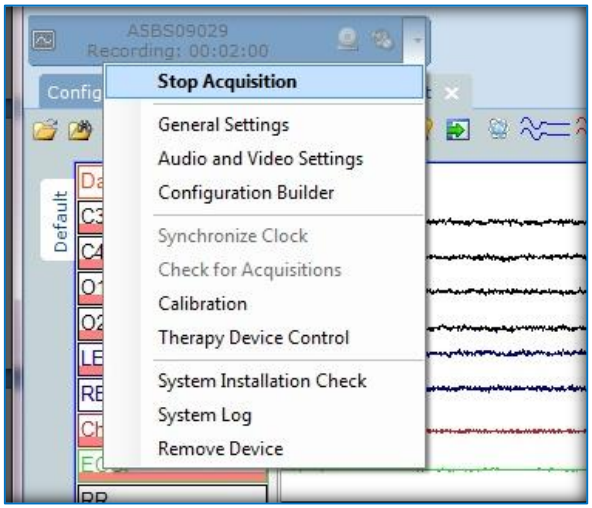
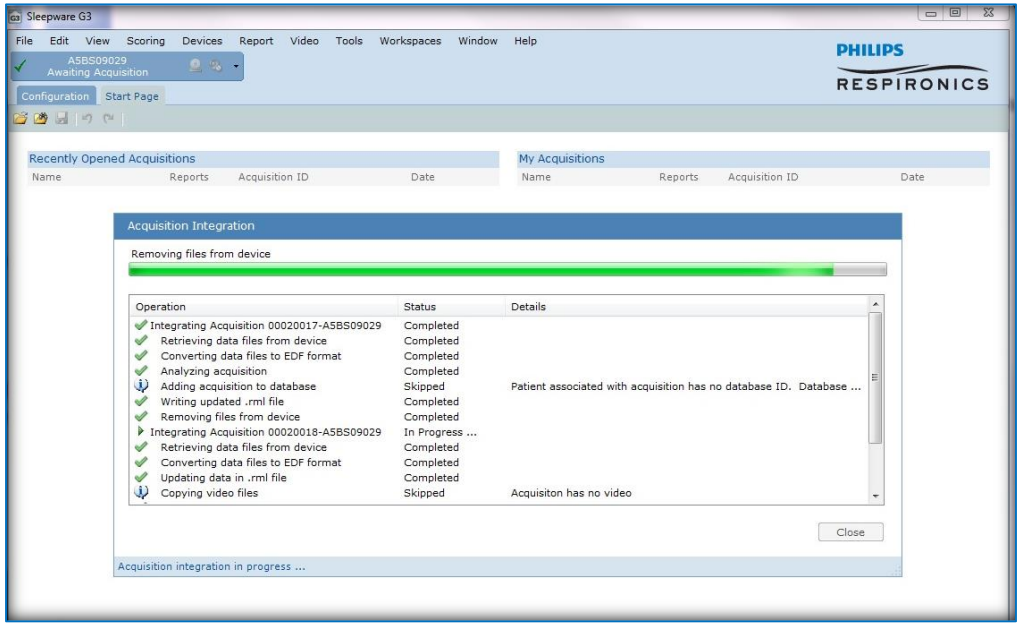
Stop Acquisition





To **Stop** the acquisition, you can click on the red stop sign on the starter bar or click the drop-down triangle located on the **right** side of the **Starter Bar** and select **Stop Acquisition** from the list and click on **YES** to confirm that you want to stop the acquisition. The **Acquisition Integration** screen appears.

Alice 5/Alice 6/Alice LE base stations hold the master copy of the data until the integration is successfully completed at the end of the acquisition.



Thank you!

Note: Screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.
Disclaimer: Screenshots may change based on software version.

Consult Sleepware G3's online help for additional information.

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PHILIPS

Sleepware G3 Training Module

Installing an SQL Server Database

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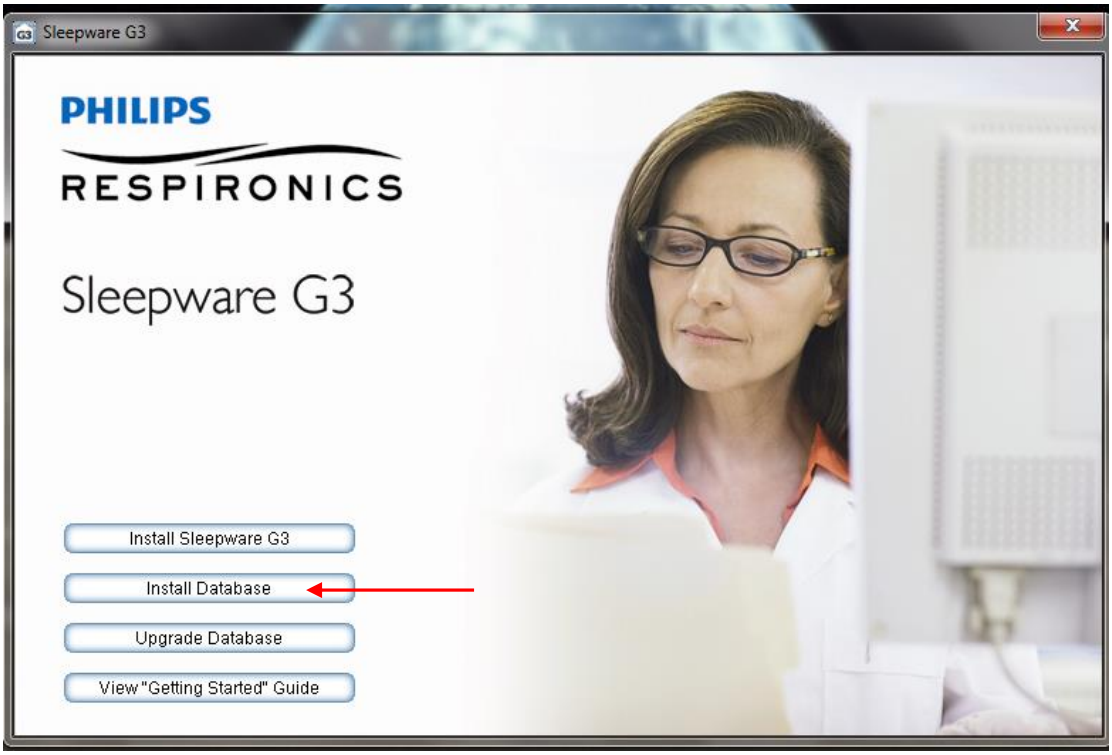
Installing an SQL Server Database on Computers without an Existing Database

Sleepware G3 utilizes the Microsoft SQL Server Express 2008 database. The installer utility for the database is provided on the Sleepware G3 software DVD. This installer utility will prompt the user to install the SQL Server Express 2008 automatically if there is not an existing database already on the computer (such as EncorePro). Once installed, the Sleepware G3 database instance default name will be: SQLEXPRESS_SW3.

The database should be installed on a workstation or server that can be accessed by other workstations running Sleepware G3. Before installation, ensure that the workstation meets the Sleepware G3 System Requirements included on the DVD case.

1. Place the Sleepware G3 software DVD into the DVD drive of the computer. The disc will be detected and automatically open to the Sleepware G3 splash screen as shown below.

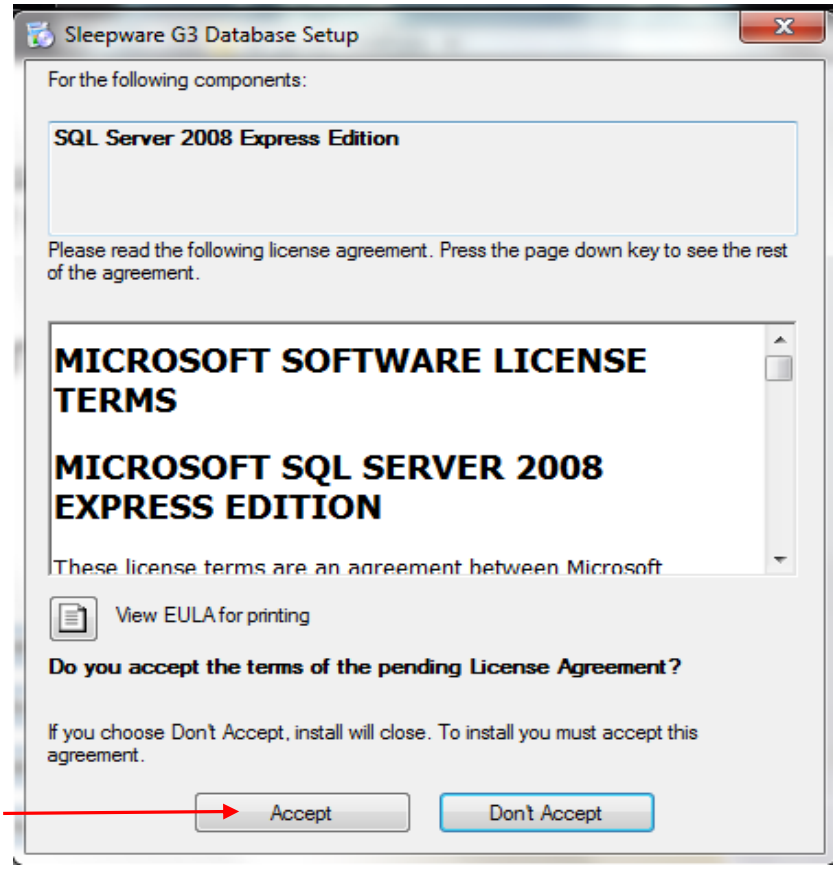
2. Select **Install Database**.



Select Install Database

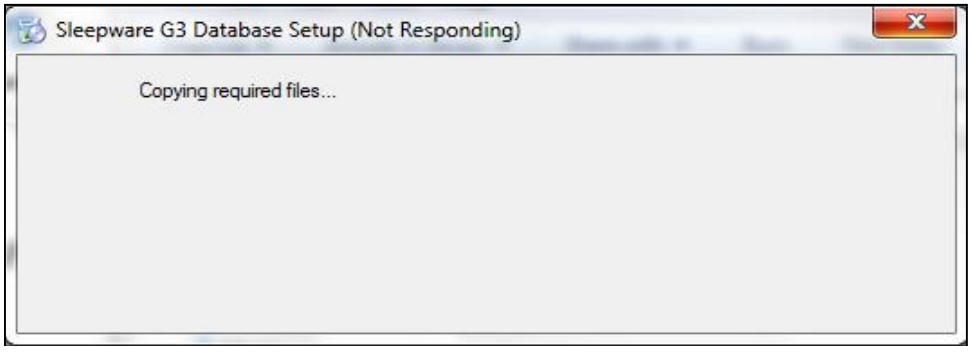
***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

3. Read the Microsoft Software License Terms Agreement, and select **Accept** to continue the installation.



Accept the License Agreement to Continue

4. The Sleepware G3 Database Setup window will appear and display, “Copying required files…” SQL SERVER 2008 R2 Express will now begin installing.

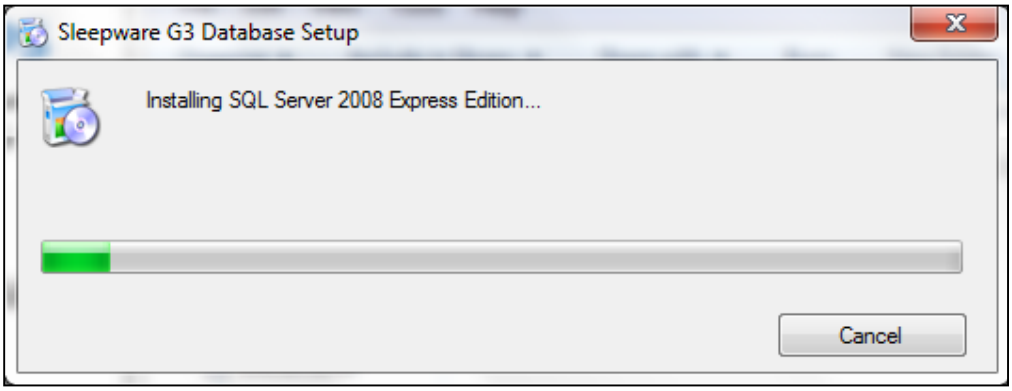


Sleepware G3 Database Setup Window

Note: It is common to see a “(Not Responding)” message during this step as shown above. This is normal.

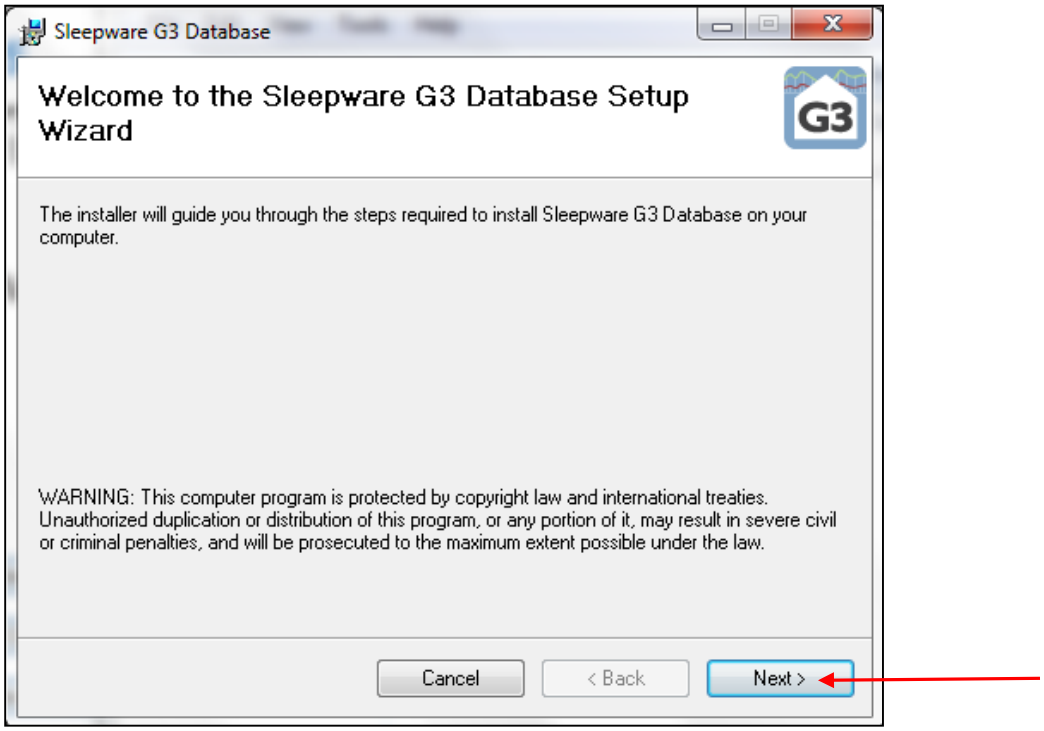
***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

5. The installation of SQL Server 2008 R2 Express Edition typically takes 10 to 15 minutes. A status bar will appear to show the installation progress.



Installation Status Bar

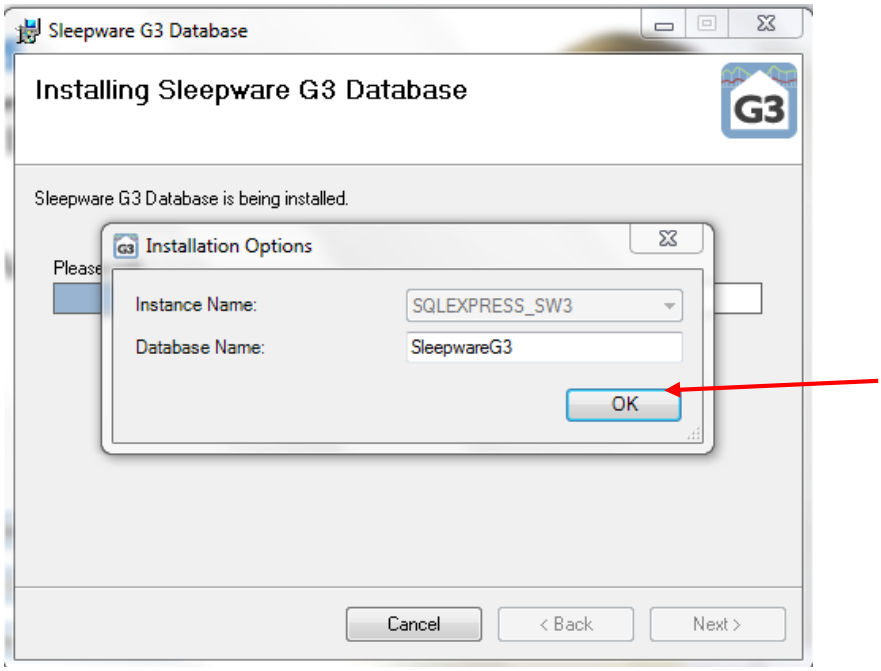
6. Once the SQL SERVER 2008 R2 Express has finished installing, the "Welcome to the Sleepware G3 Database Setup Wizard" window will appear. Click **Next** to install the SQLEXPRESS_SW3 database.



Click Next to Continue the Installation

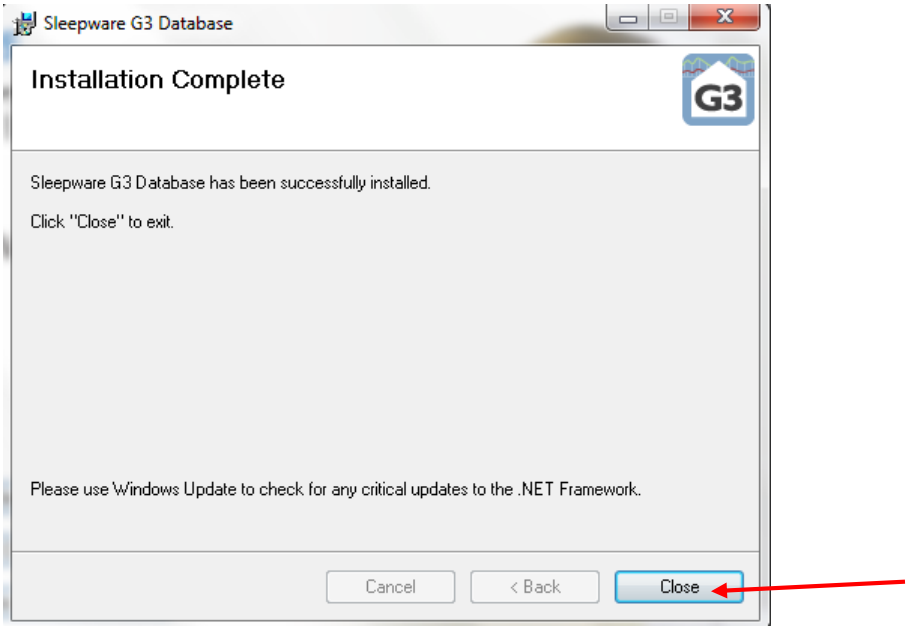
***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

7. The installation will run, and then display the SQL instance name as: SQLEXPRESS_SW3. The Database Name will display as: SleepwareG3. Do not make any changes to the database name. Click **OK**.



Click OK to Continue the Installation

8. The Sleepware G3 database will continue to install. Once it is complete, you will receive an "Installation Complete" message. You have now successfully installed SQL Server Express and G3 database. Click **Close**.

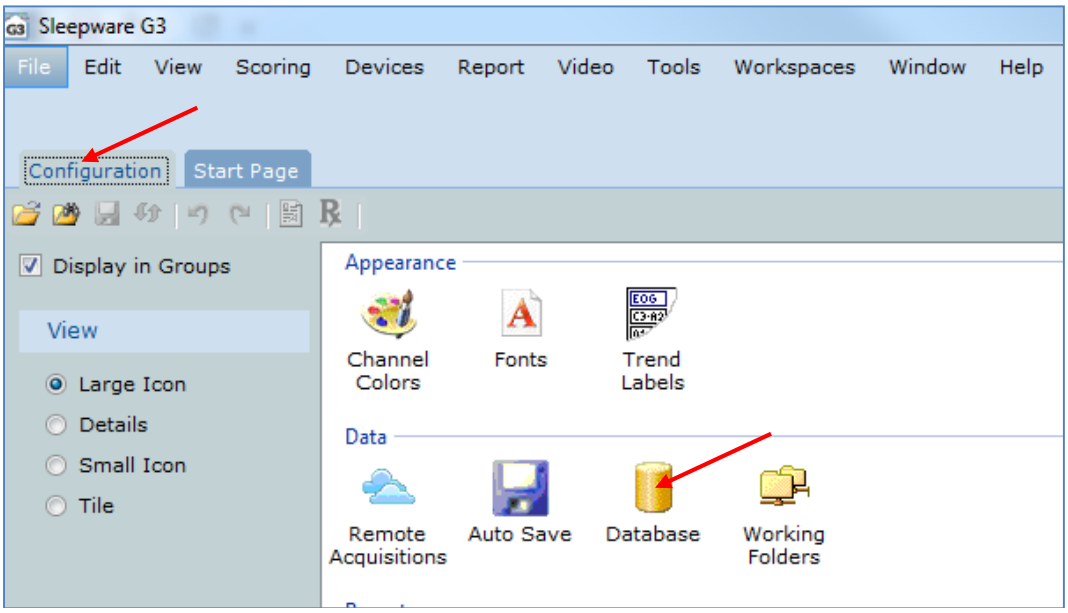


Click Close When Installation is Complete

9. Now that the database is installed, we will enter the database name in Sleepware G3 to enable connectivity. Double click the Sleepware G3 icon on the desktop to open Sleepware G3.

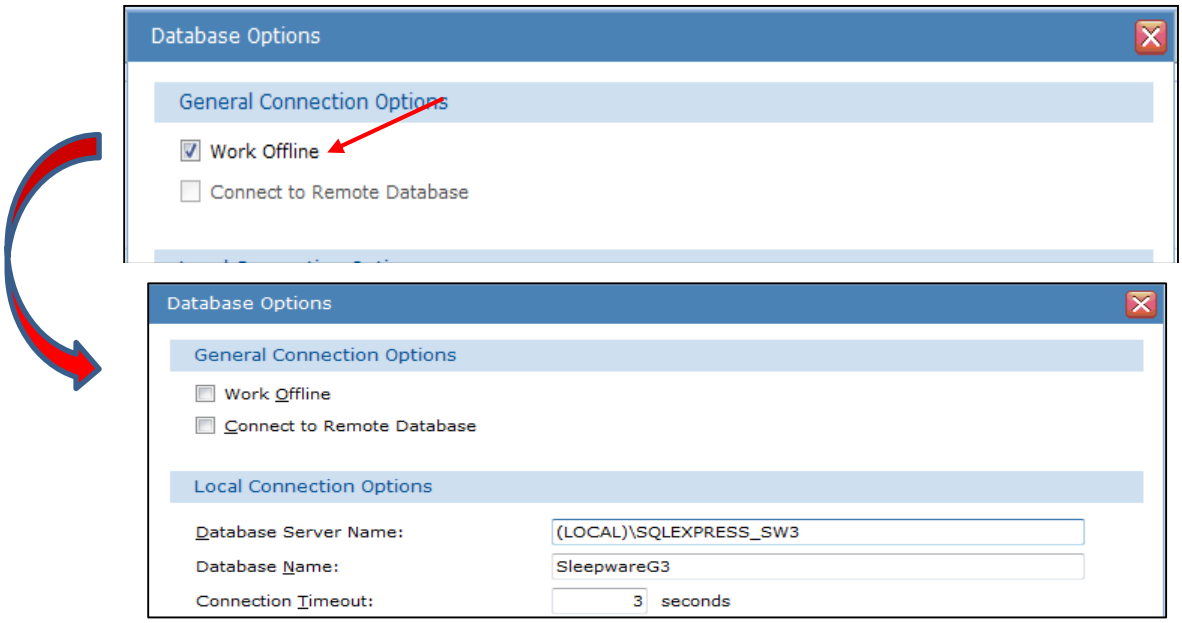
***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

10. Once Sleepware G3 is open, go to the Configuration tab, and double click on **Database**.



Double Click the Database Icon in Sleepware G3

11. Uncheck the Work Offline box. In step 12, we will show how to find the database name.



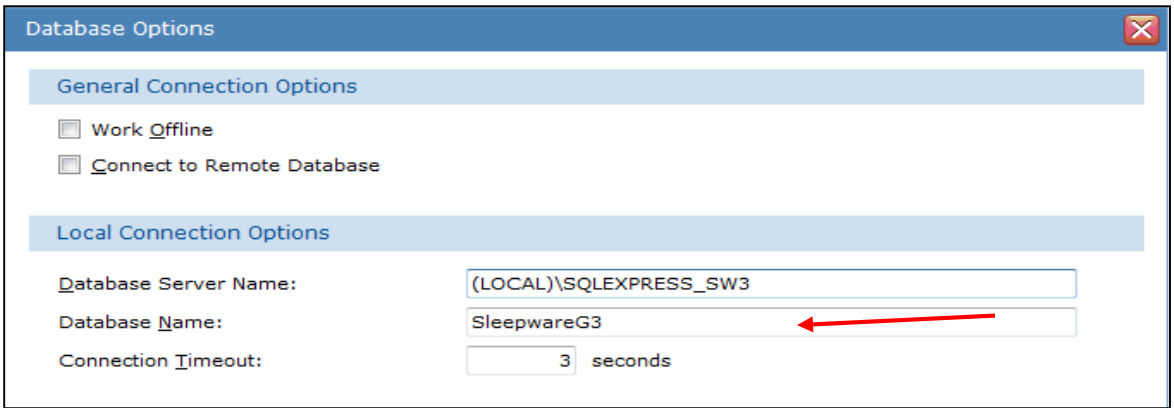
Uncheck the Work Offline Box

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

12. The steps below will walk through how to connect to the database if it has been installed on an individual workstation running Sleepware G3 or on a networked workstation or server.

Option 1: Database installed on a single Sleepware G3 workstation (for users who are **NOT** sharing a database across multiple machines).

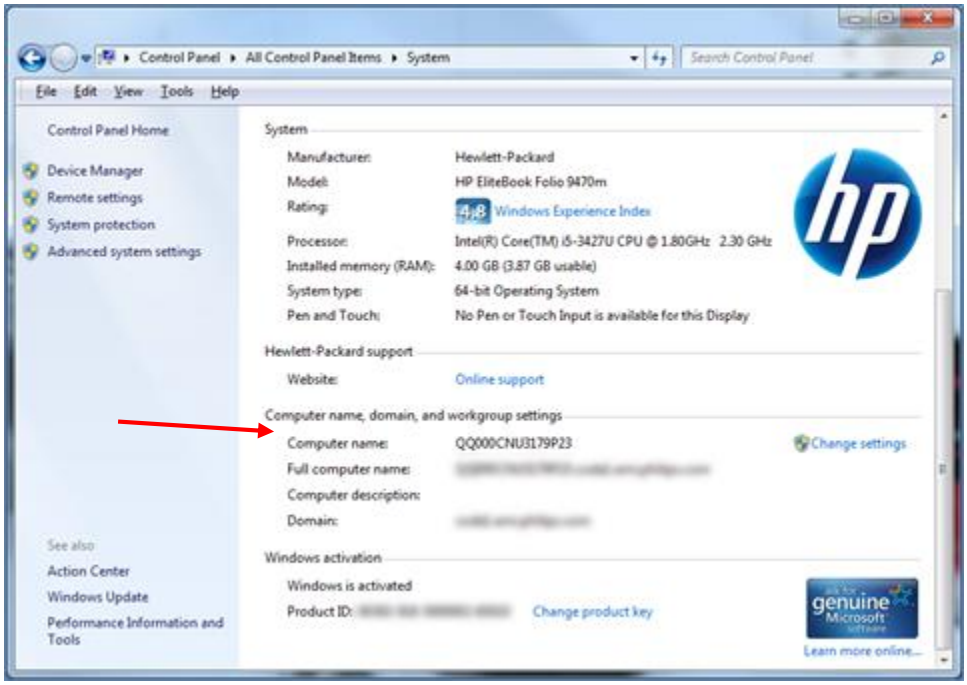
You can fill in the Database server field name to match the name below in Database Server Name.



For a Single Workstation, Fill in the Database Name to Match the Database Server Name

Option 2: For individual users who **ARE** sharing a database across multiple machines, you will need to perform a few additional steps to find the 'shared' database name and enter it into Sleepware G3.

a. To do so, click **Start > All Programs > Control Panel > System**. Find and make a note of the Computer Name. You will need this in the next steps.

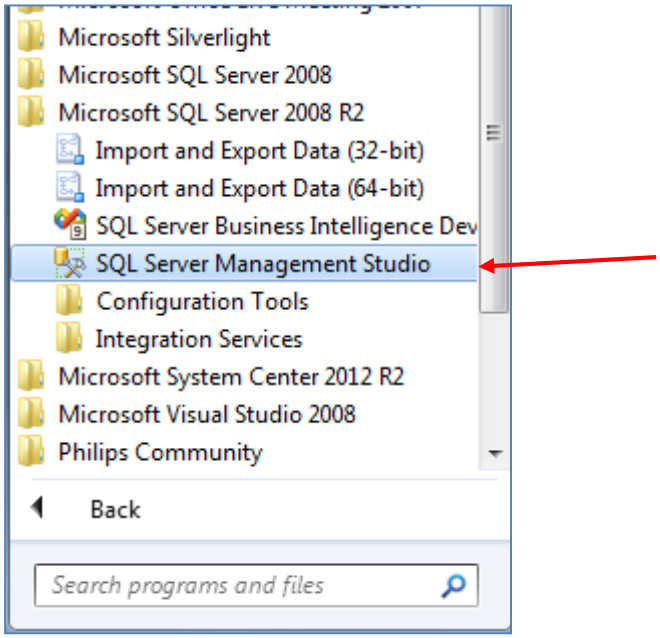


Note the Computer Name

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

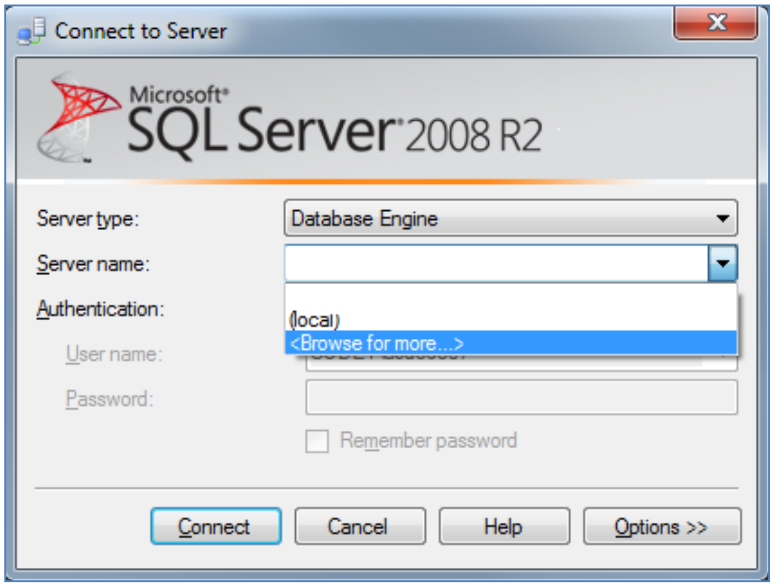
b. Next, you will need to open SQL Server Management Studios on the database computer. To do so, click **Start > All Programs > Microsoft SQL server 2008 R2**.

c. Click on "Microsoft SQL server 2008 R2" to expand the field, then click on **SQL Server Management Studios**.



Select SQL Server Management Studio from the All Programs Menu

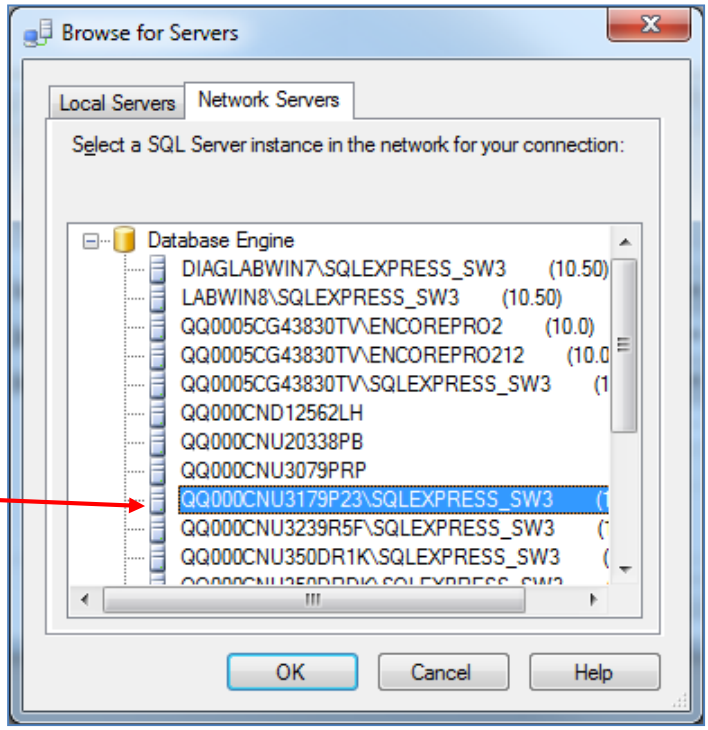
d. Once SQL Server Management Studios has launched, you will need to locate the PC and SQL instance for the installed database from a dropdown list. To do so, click the drop down arrow for the "Server name" field, and select **Browse for more.**



Select Browse for More in the Server Name Field Dropdown Menu

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

e. The “Browse for Servers” window will open. Click on the Network Servers tab, and locate your computer name\SQLEXPRESS_SW3 in the list. Once you have located this, highlight it in the list, and click **OK**.



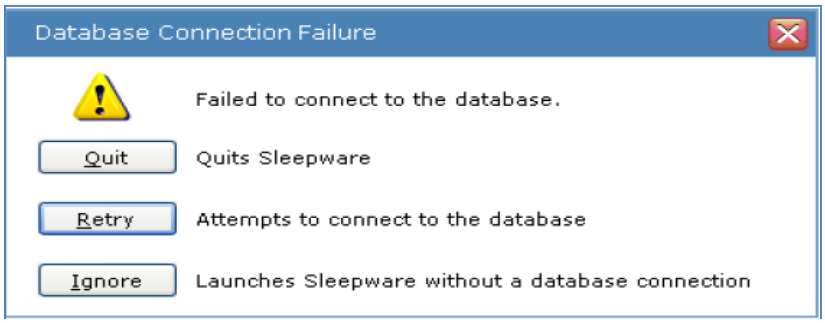
Select your Computer name\SQLEXPRESS_SW3 from the List

f. Copy the entire highlighted area in the server name box, this will be the information you will enter in the database section of Sleepware G3.

Copy the Name in the Server Name Box

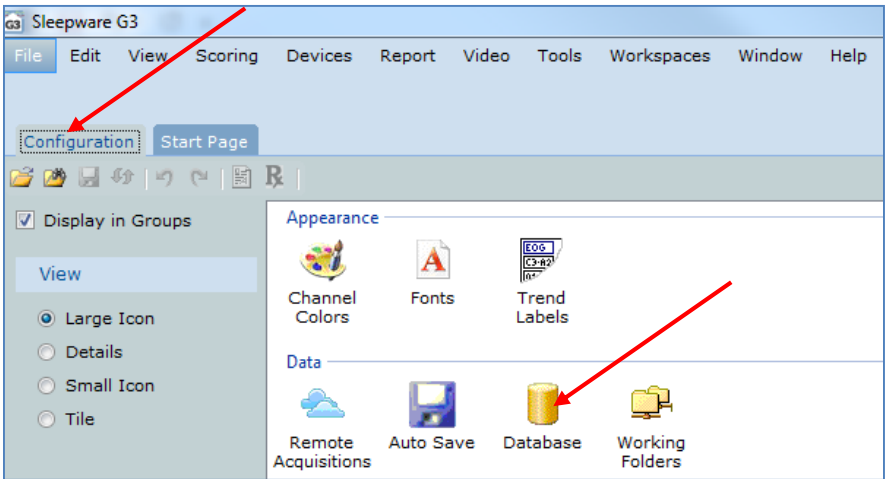
***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

13. If you have closed Sleepware G3, double click the Sleepware G3 icon on the desktop to launch the software. Since "Work Offline" was unchecked, you will see the following "Database Connection Failure" message. This is normal. Click **Ignore** to launch Sleepware G3.



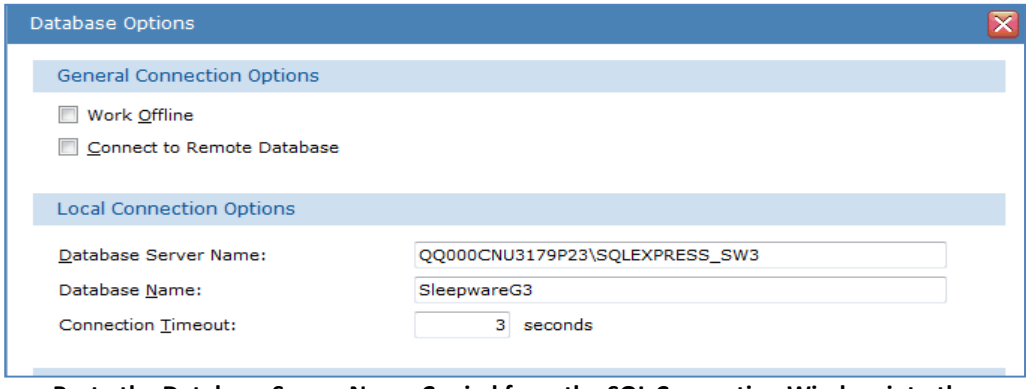
Database Connection Failure Window

14. Go to the Configuration tab, and double click on **Database**.



Double Click the Database Icon in Sleepware G3

15. Paste the information you had copied from **Step 11 f** from the Microsoft SQL Management Studios Connection window into the Database server name location, and click **OK**.



Paste the Database Server Name Copied from the SQL Connection Window into the Database Server Name Field in Sleepware G3

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

16. Your database should now be connected. The status bar in the bottom right corner of the configuration page will display the database connection status.

Database Connection Status

You can now enter the same database information on all other workstations that will share this database.

***Disclaimer:** Screenshots are from the Sleepware G3 Software and Online Help and may change based on the software version.

Consult the Sleepware G3 Online Help for additional information.

PHILIPS

Sleepware Training Module

Combining Acquisitions

June 24, 2016

PHILIPS

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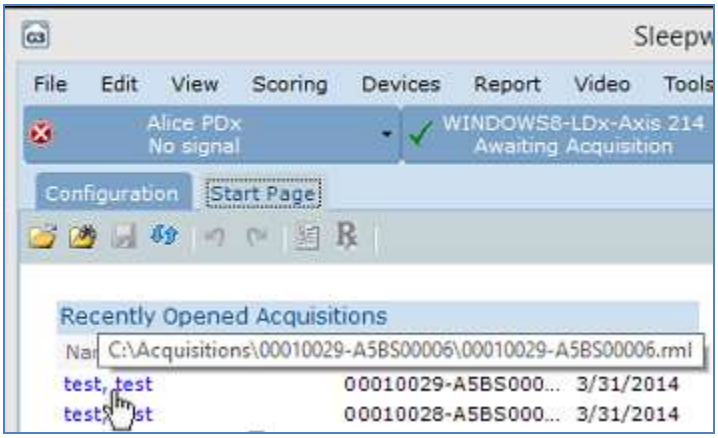
PHILIPS

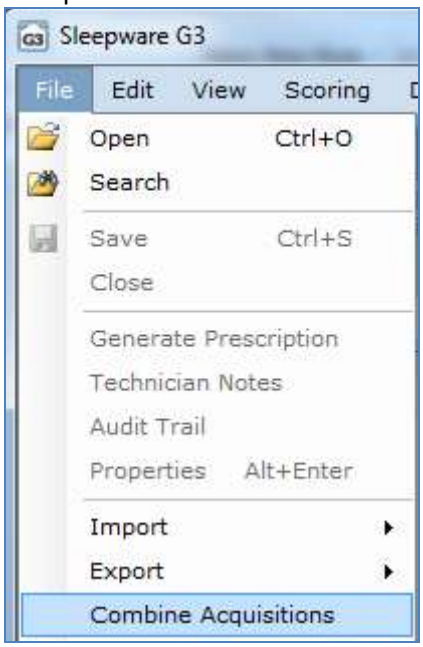
Combining Acquisitions

To combine a sleep study using Sleepware G3, both portions must be visible on the Start Page in the "Recently Opened Acquisitions" section. If both portions of the study do not appear on this list, you must open and then close the acquisitions. (In the example below, the acquisition numbers are 00010029 and 00010028).

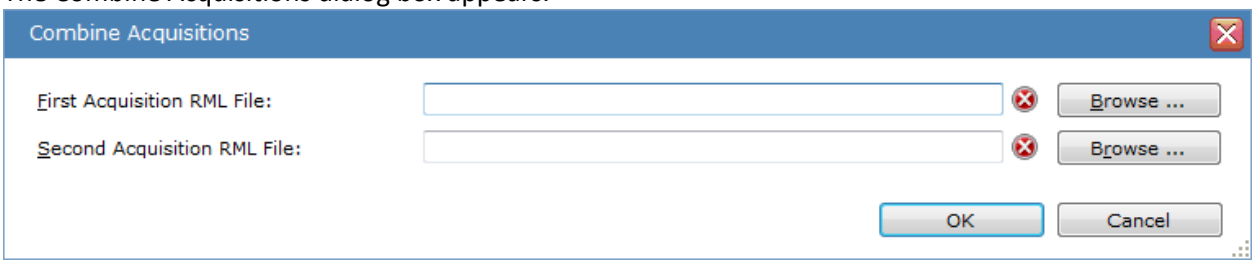
1. Once they appear place the mouse pointer over the patient name so the location of this sleep study is displayed. Make a note of the pathway displayed. In the example below the location is
   C:\Acquisitions\00010029-A5BS00006\00010029-A5BS000006.rml



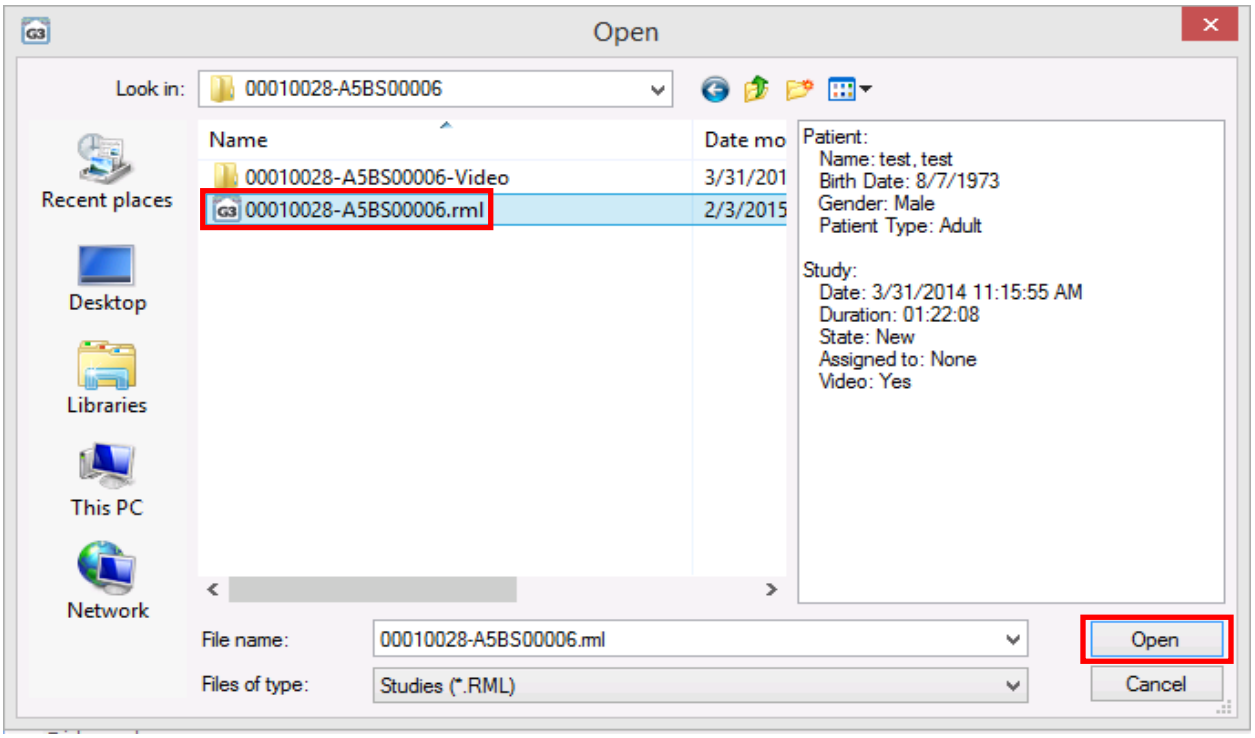
2. From the File menu, select Combine Acquisitions:



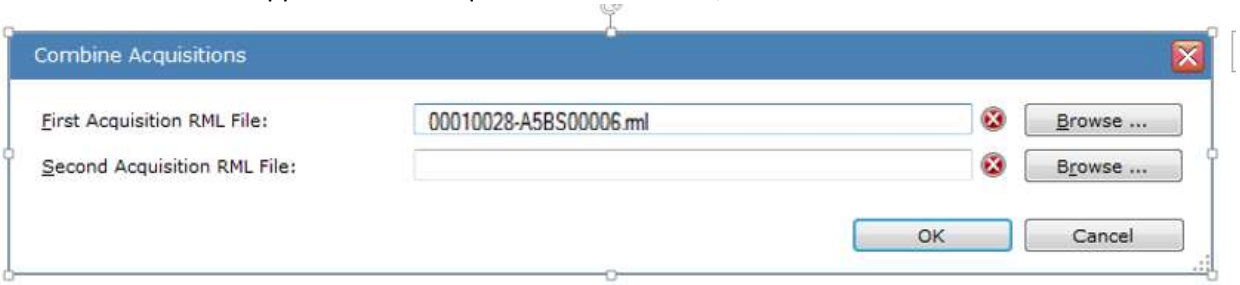
The Combine Acquisitions dialog box appears.



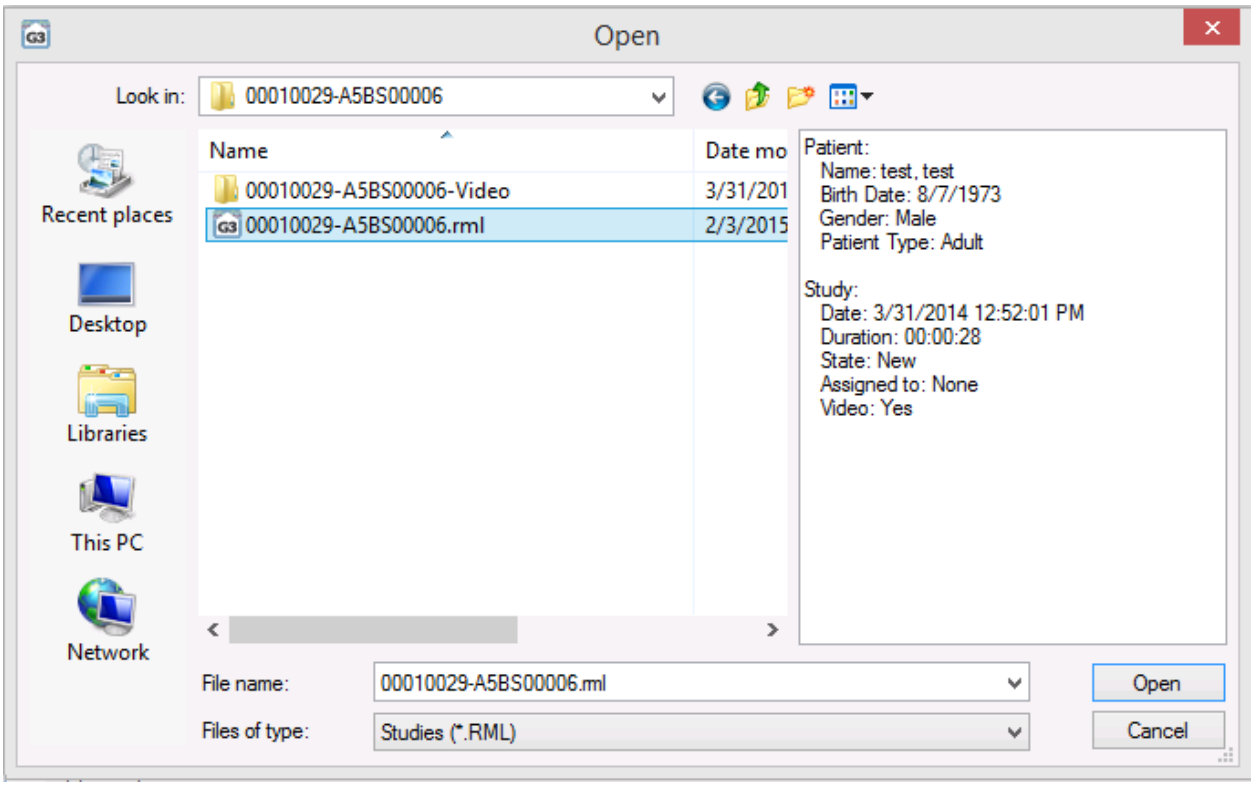
3. Select Browse then navigate to the first acquisition's .RML file, as .noted in the previous step.
4. Click on the .rml file. It will appear in the File name selection below.



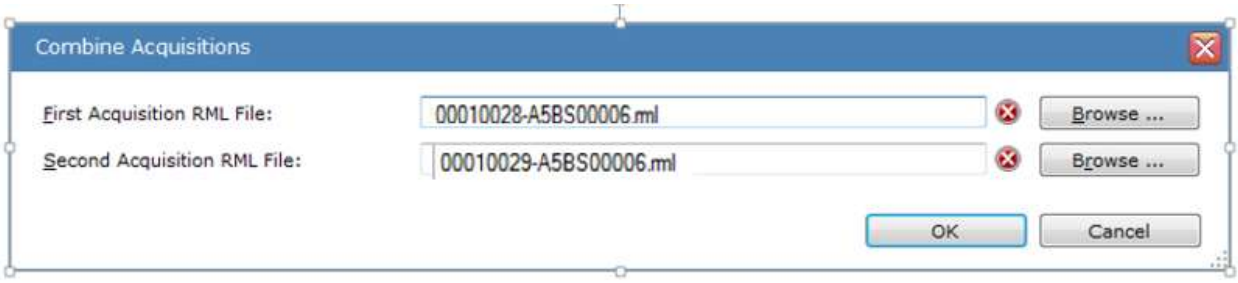
5. Click on Open.
   The file name will appear in First Acquisition RML file box, as shown below.



6. Click on Browse to find the second acquisition RML file in the same way.
7. Select the RML file.



8. Click on Open.



9. Now that both files appear, select OK to combine.

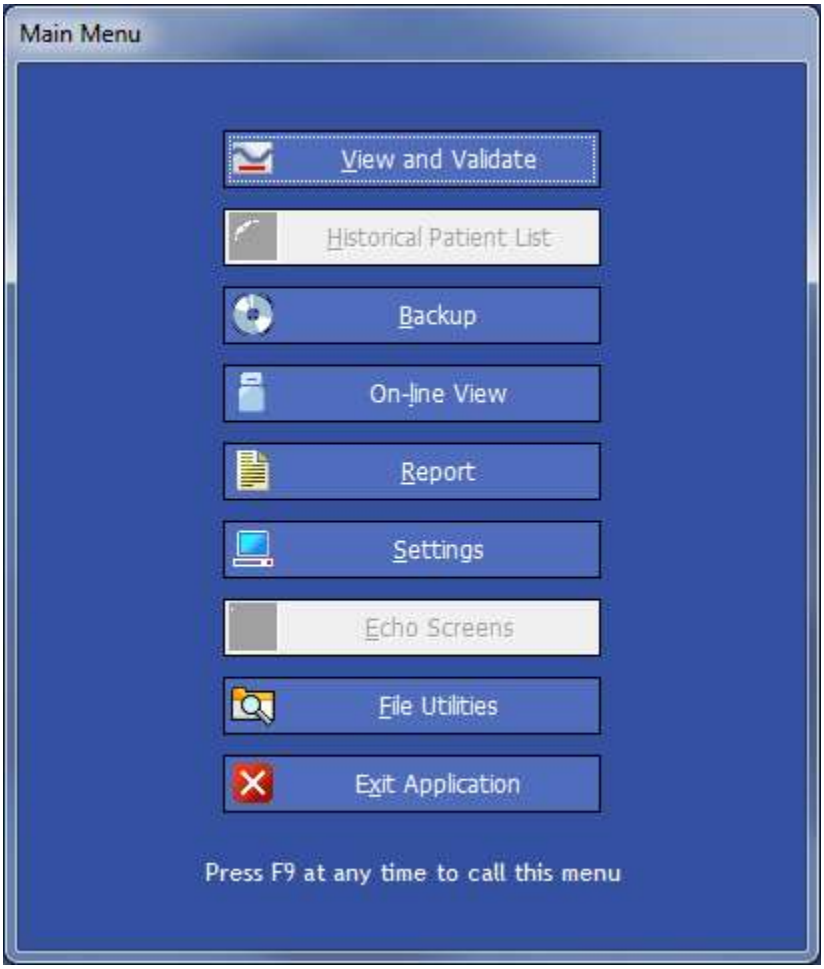
Tips:

- The staging will be lost for the second part, but all other scoring, comments, and video are retained.
- Both parts must have been ran with the same configuration to be combined. Note, an issue exists in version 3.4 and earlier where an error message was displayed. This error message states the acquisitions do not have the same configuration even though they were ran with the same montage. This issue was fixed in version 3.5 and later.
- More than two acquisitions can be combined, but they must be done two at a time.

PHILIPS

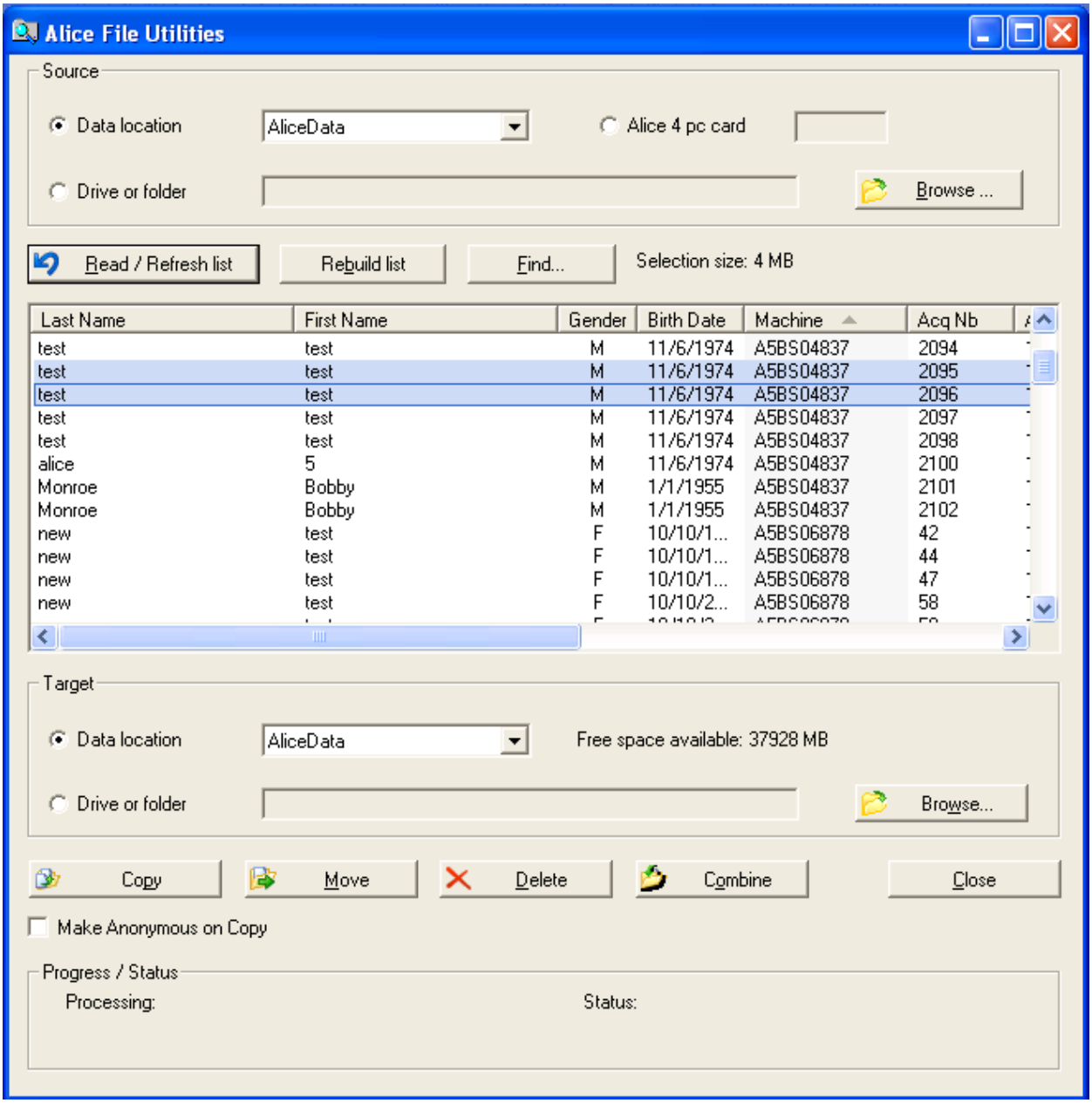
Sleepware 2.x

1. From the Main Menu, select File Utilities.



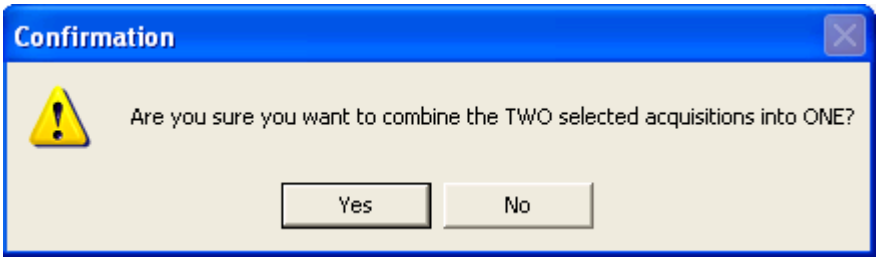
The studies in which you would like to combine will be listed here.

2. Highlight both of them by clicking on the first portion.
3. Hold down the Ctrl button (on the keyboard) and click on the second study listed, so both portions are highlighted.



4. Click on Combine.

A Confirmation dialog box will appear asking “Are you sure you want to combine the TWO selected acquisitions into one?”



5. Click on Yes.
   The studies will now be successfully combined.

Tips

- All scoring, staging, comments, video, and audio will be lost for the entire study.
- More than two acquisitions can be combined, but they must be done two at a time.
- Both portions of the study MUST have been recorded using the same configuration in order to be combined.

Consult Sleepware's online help for additional information.

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RPM 06/24/2016

Sleepware G3

How to use Physician list tool.

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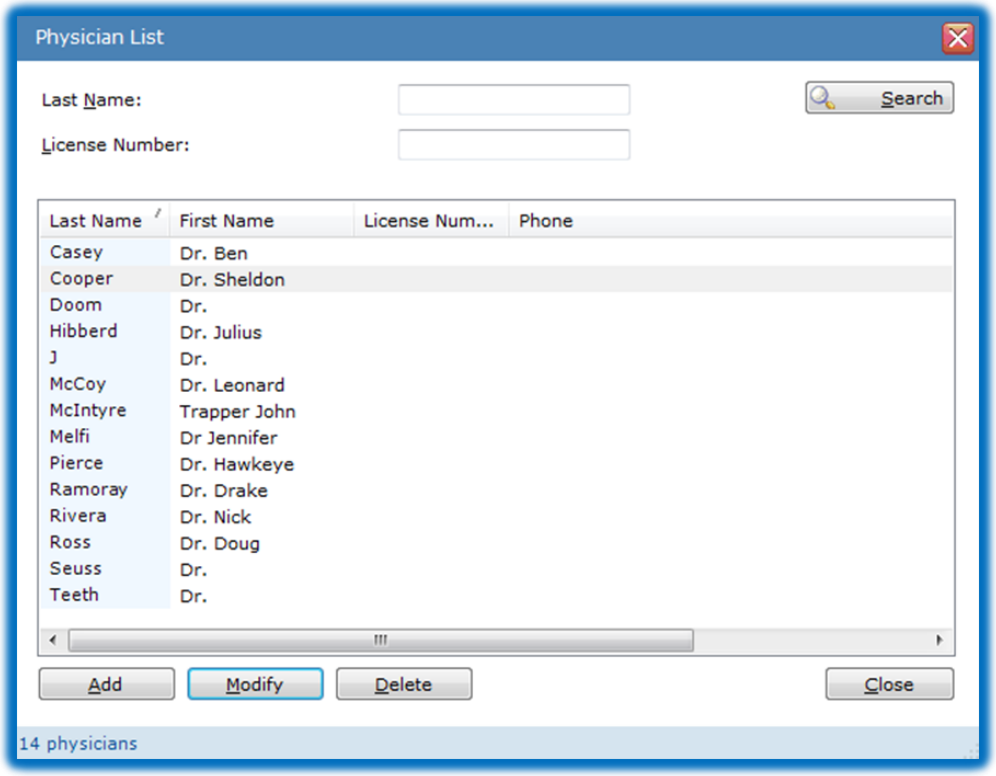
PHILIPS

What is Physician List?

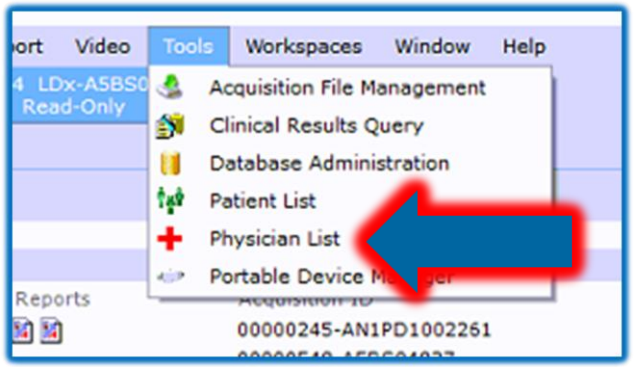
- The Physician List window allows you to search for, view, add, modify, and delete physicians in the database. If the database is not available and you are working offline, this search is disabled. The physician information is used for both referring and interpreting physicians.

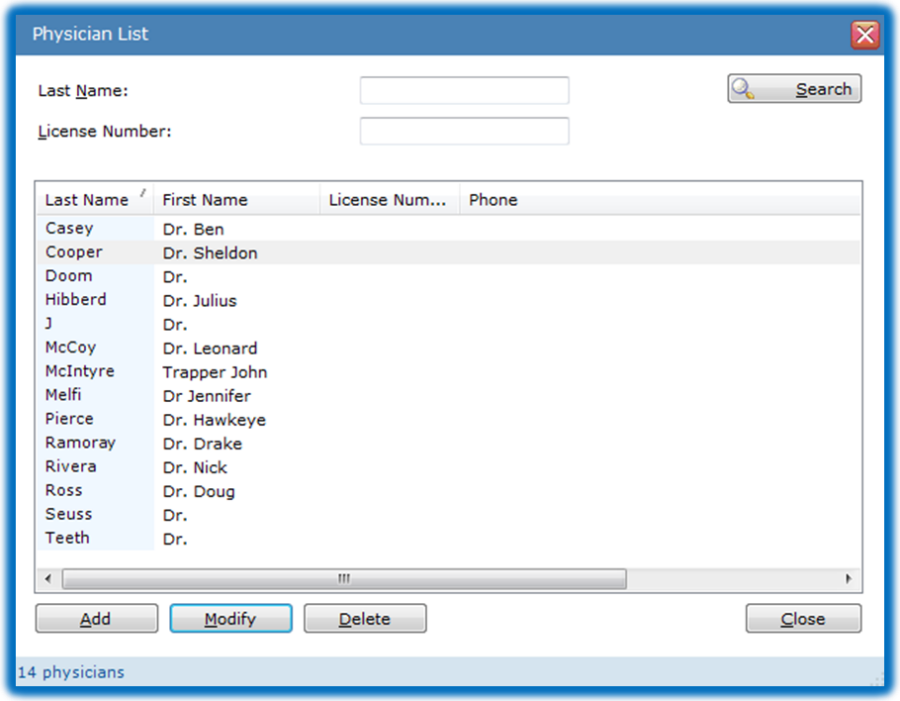


PHILIPS

Physician List

- To access the Physician List, select **Tools > Physician List** from the main menu bar.





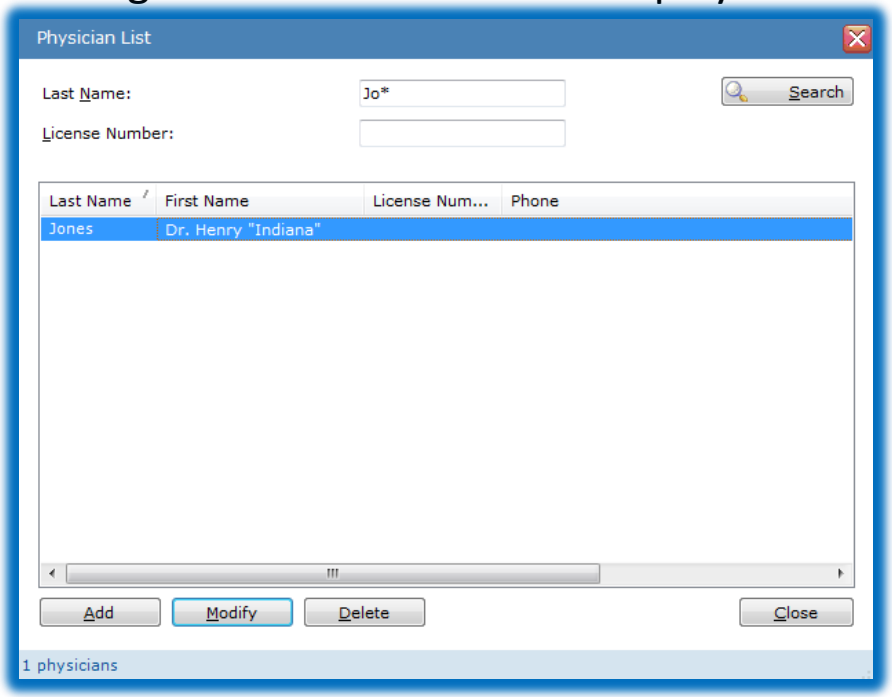
PHILIPS

Search for an Existing Physician

- Enter a full or partial name in the Last Name box.
  Note: You can also use a wildcard character ("*") to represent any number of characters within the name. Some examples for the name "Johnson" include "Jo*n", "Jo*", and "*son".

- Click the **Search** button to execute the search.

- All physicians matching the search criteria are displayed.



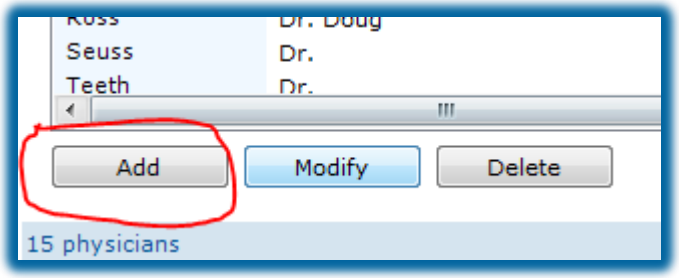
PHILIPS

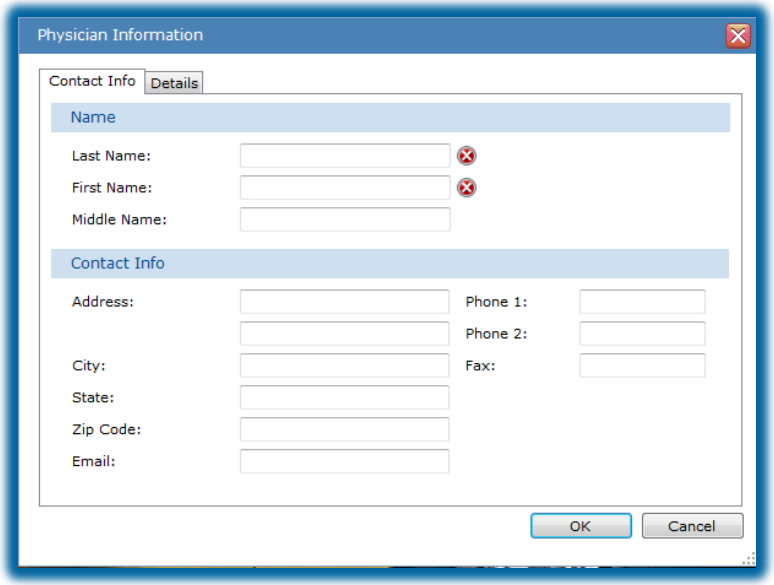
Add a New Physician

- Click the **Add** button.
  The Physician Information window opens.

- Using the Contact Info and Details tabs, enter physician information in the spaces provided.

- Click **OK** to save the physician information and close the window.

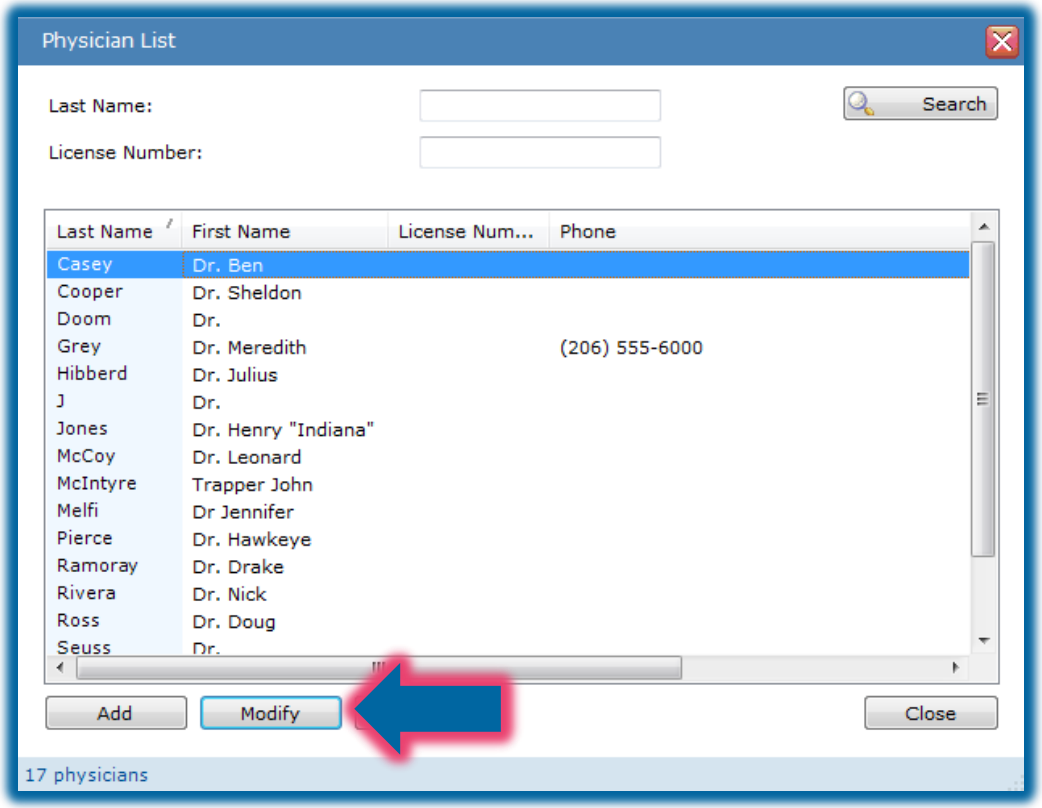




PHILIPS

Modify an Existing Physician's Information

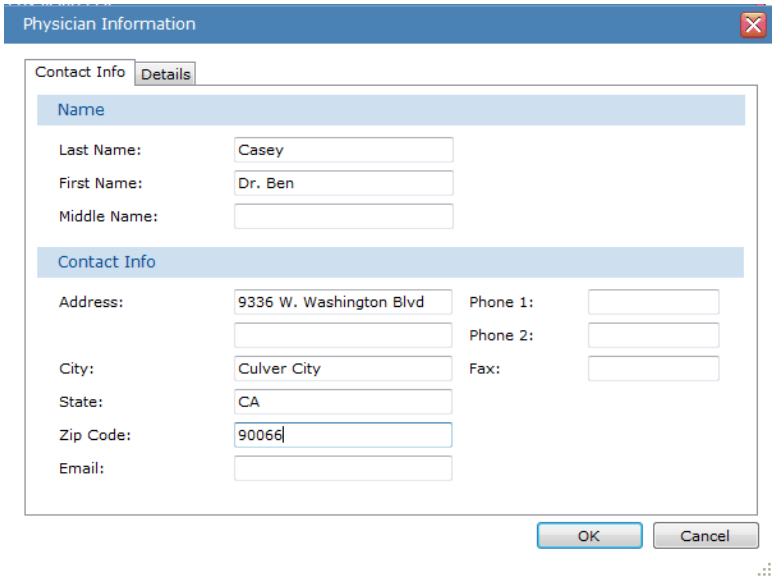
- (Optional) Perform a search to locate the physician.
- Select the physician and click the **Modify** button. The Physician Information window opens.

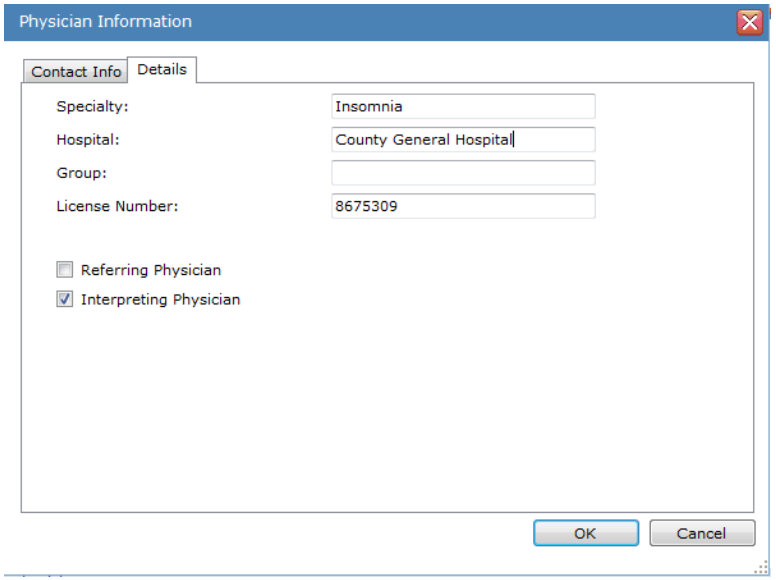


PHILIPS

Modify an Existing Physician's Information

- Using the Contact Info and Details tabs, edit the physician information shown as needed and click **OK**.
- The changes are saved and the window is closed.

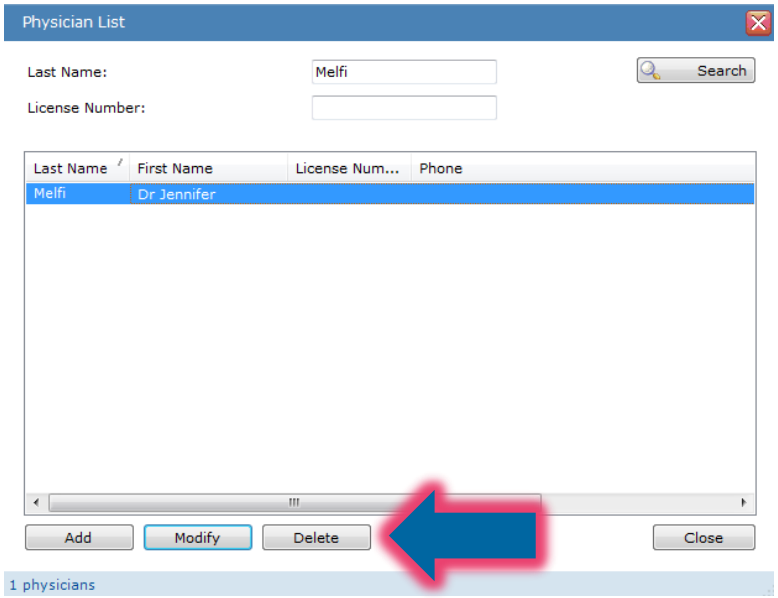


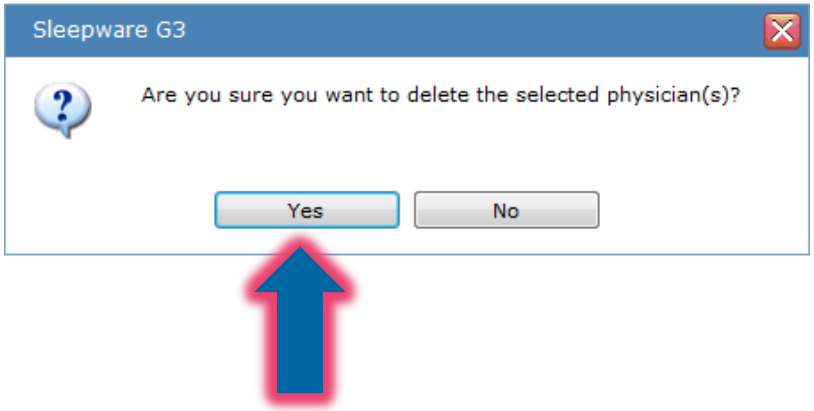


PHILIPS

Delete an Existing Physician

- (Optional) Perform a search to locate the physician to be deleted.
- Select the physician to delete and click the **Delete** button. To select multiple physicians, press **Ctrl** and click on each physician row as needed, then click on **Delete**. A confirmation prompt is displayed.
- Click **Yes** to continue. The physician is removed from the database.
- To delete a Physician, all patient studies assigned to the physician must be cleared or reassigned to another physician.





PHILIPS

Thank You

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

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Sleepware G3

How to use Patient list tool.

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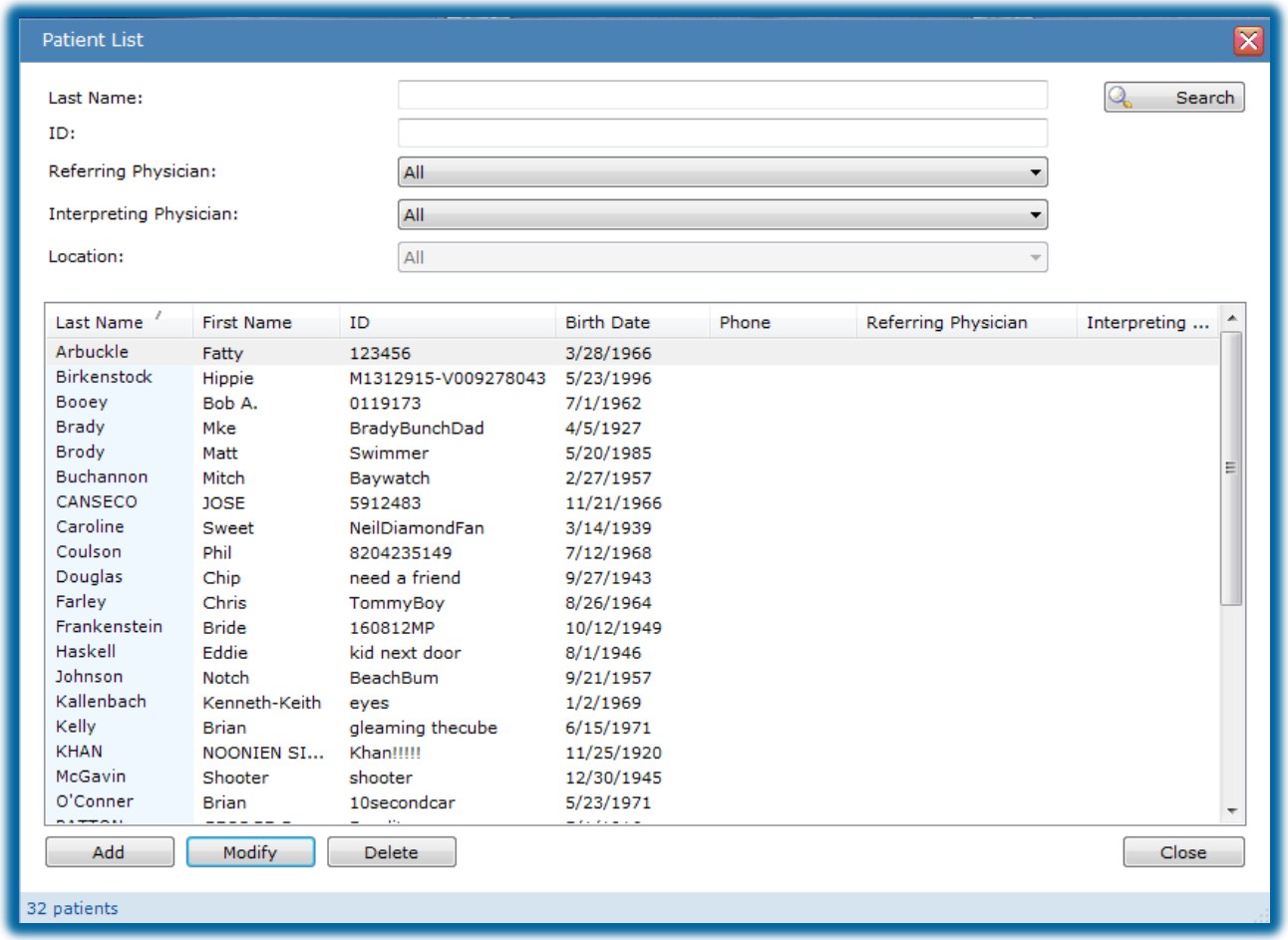
PHILIPS

What is the Patient List?

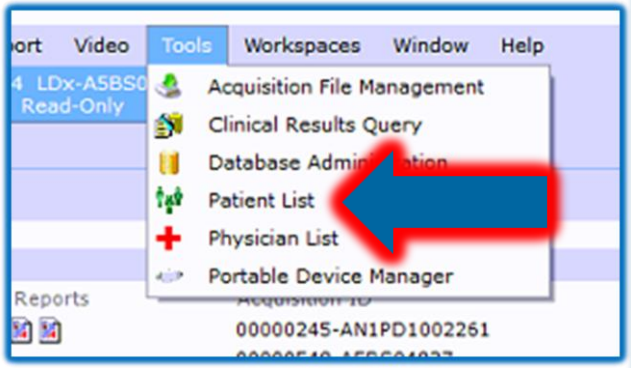
- The Patient List window allows you to search for, view, add, modify, and delete patients in the database. If the database is not available and you are working offline, this search is disabled.

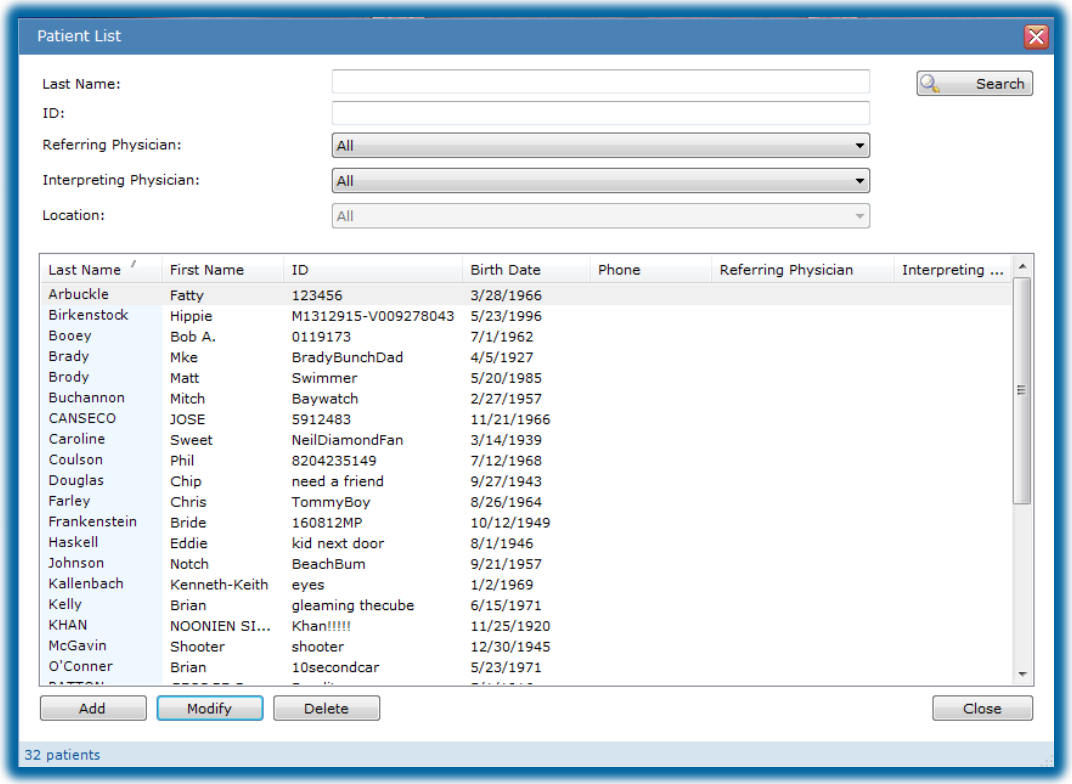


PHILIPS

Patient List

- To access the Patient List, select **Tools > Patient List** from the main menu bar.





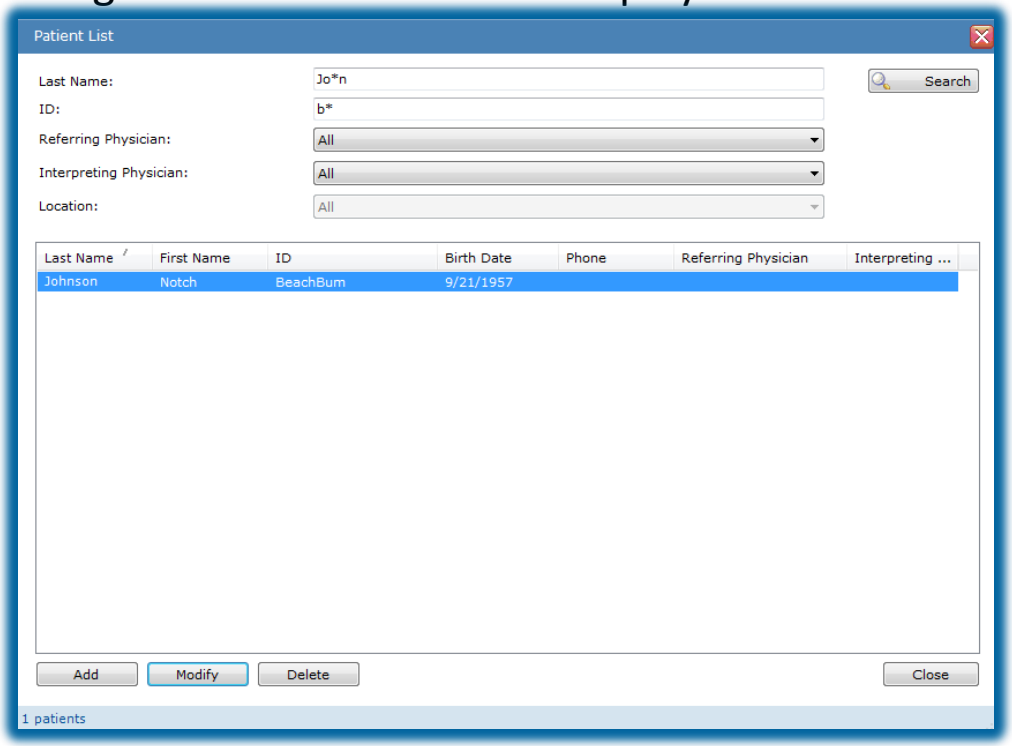
PHILIPS

Search for an Existing Patient

- Enter a full or partial name in the Last Name box. You can also include the ID and physician fields. *Note: You can also use a wildcard character ("*") to represent any number of characters within the name. Some examples for the name "Johnson" include "Jo*n", "Jo*", and "*son".

- Click the **Search** button to execute the search.

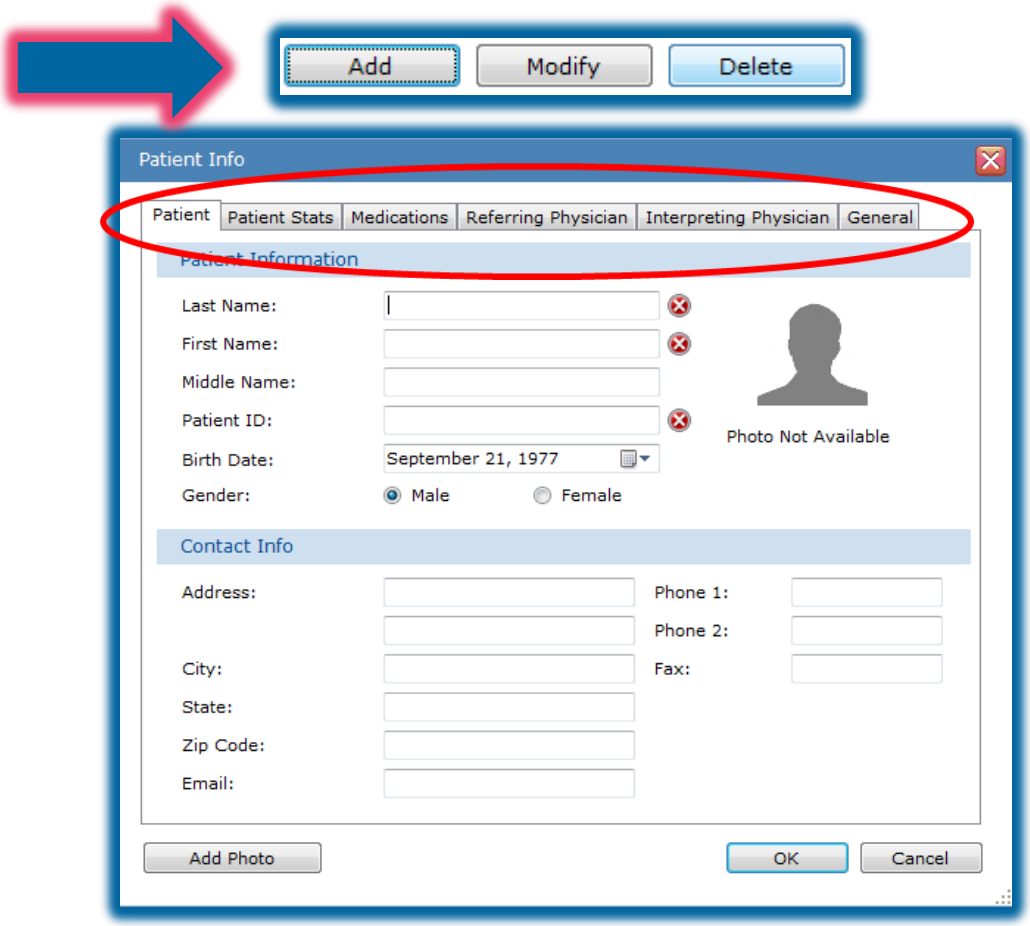
- All patients matching the search criteria are displayed.



PHILIPS

Add a New Patient

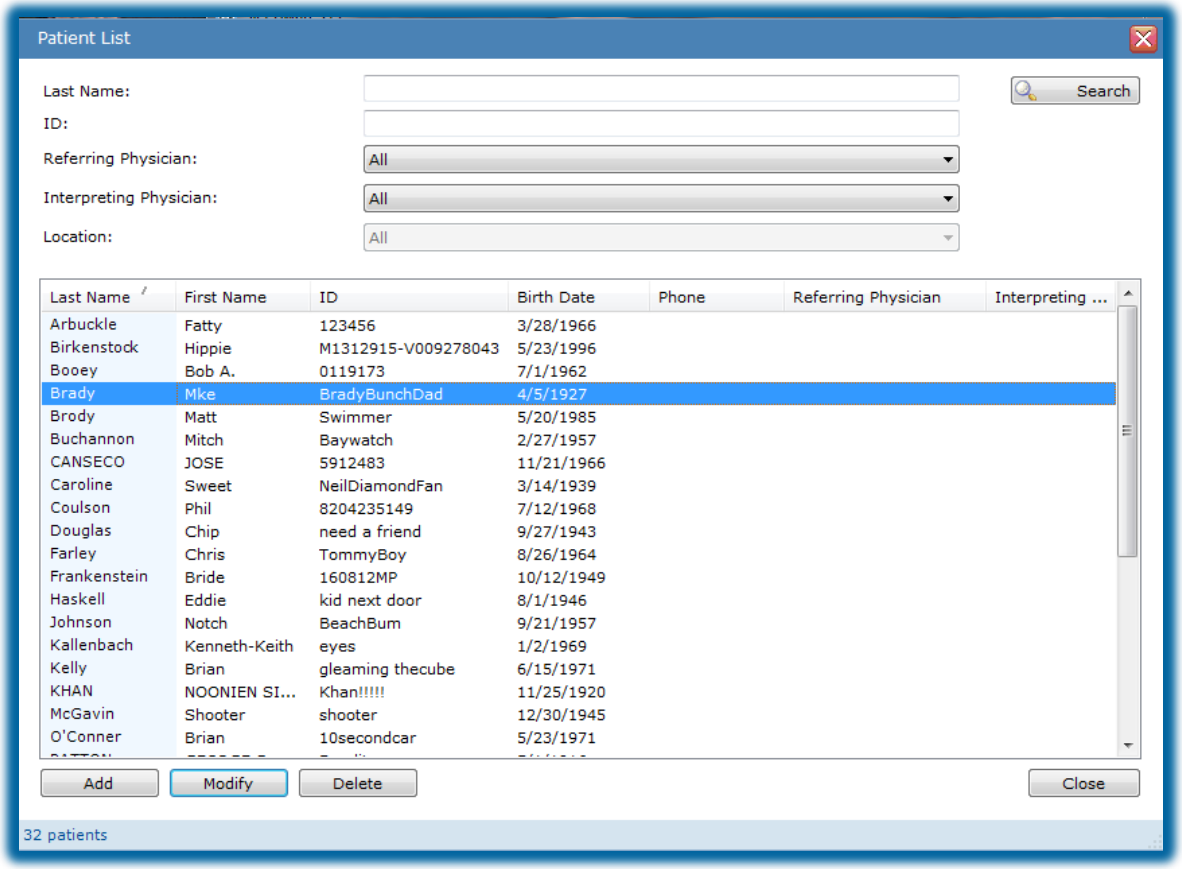
- Click the **Add** button. The Patient Information window opens.
- Using the Patient, Patient Stats, Medications, Referring Physician, and Interpreting Physician tabs, enter patient information in the spaces provided.
- Information boxes with marked with an “X” are required fields.
- Click **OK** to save the patient information and close the window.



PHILIPS

Modify an Existing Patient's Information

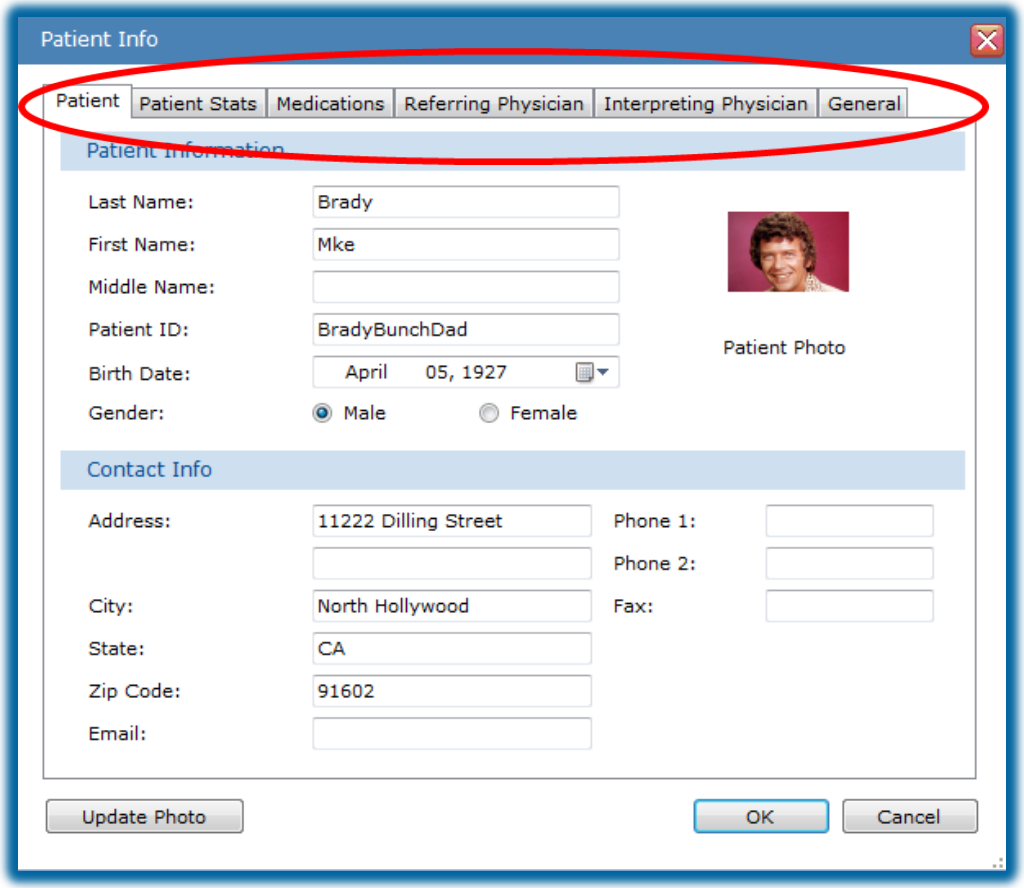
- Perform a search to locate the patient.
- Select the patient and click the **Modify** button. The Patient information window opens.



PHILIPS

Modify an Existing Patient's Information

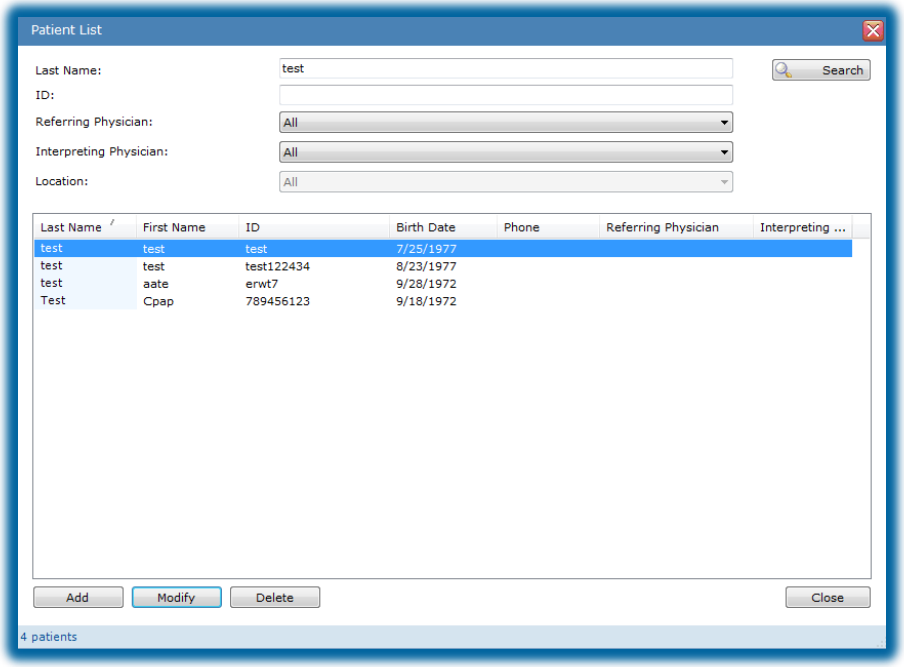
- Using the Patient, Patient Stats, Medications, Referring Physician, and Interpreting Physician tabs, edit the patient information needed.
- Click **OK** to save patient information and close the window.

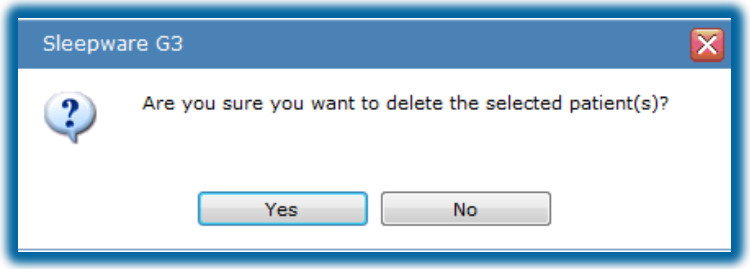


PHILIPS

Delete an Existing Patient

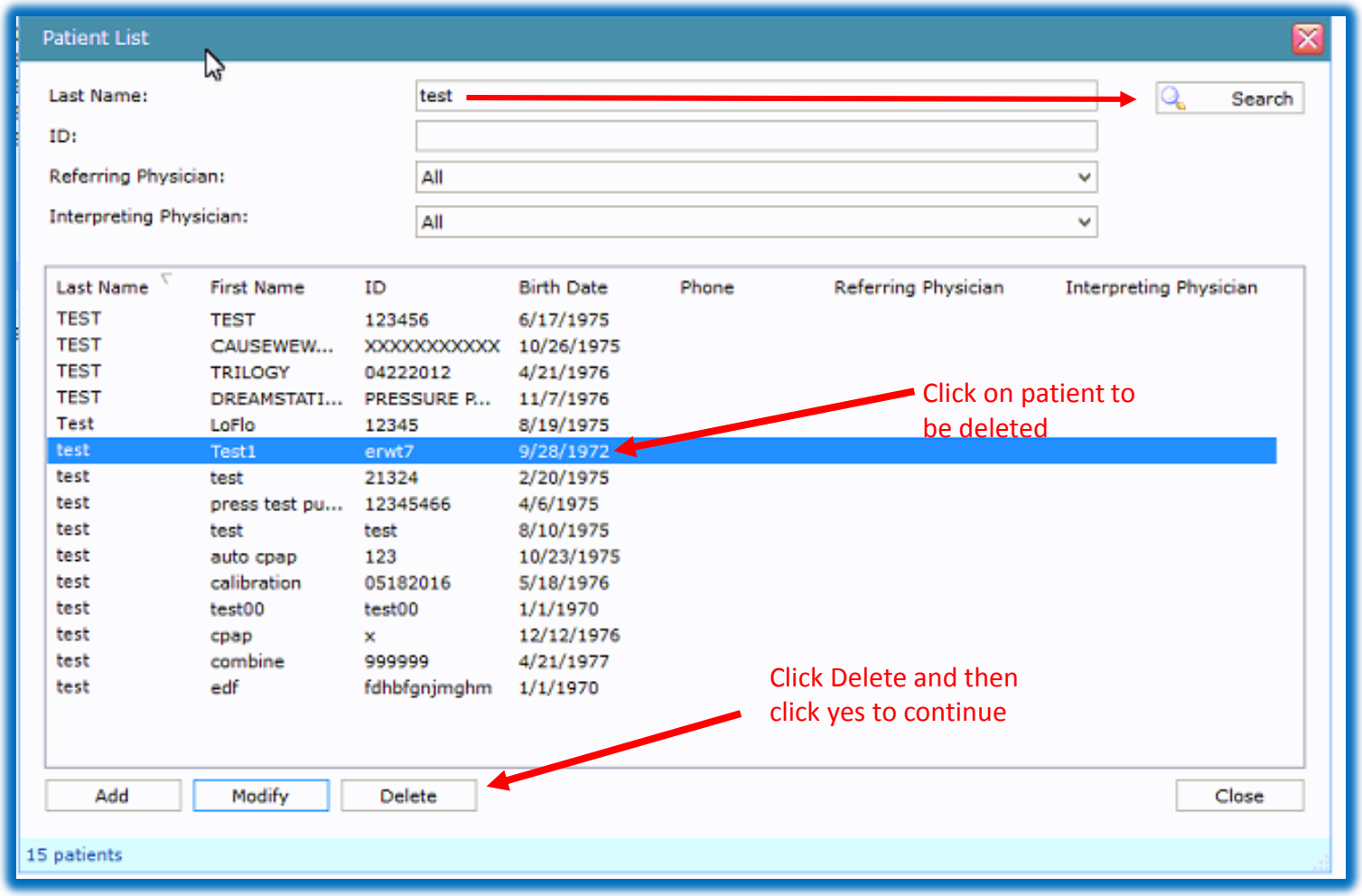
- Perform a search to locate the patient to be deleted.
- Select the patient to delete and click the **Delete** button. To select multiple patients, press **Ctrl** and click on each patient row as needed, then click on **Delete**. A confirmation prompt is displayed.
- Click **Yes** to continue.
- The patient database (DB) entry is removed from the database.
- Note: You cannot delete a patient if there is an acquisition for that patient in the database.





PHILIPS

Deleting a Patient…



PHILIPS

Thank You

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

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Sleepware G3

Using Acquisition File Management

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PHILIPS

Objectives of this Webinar

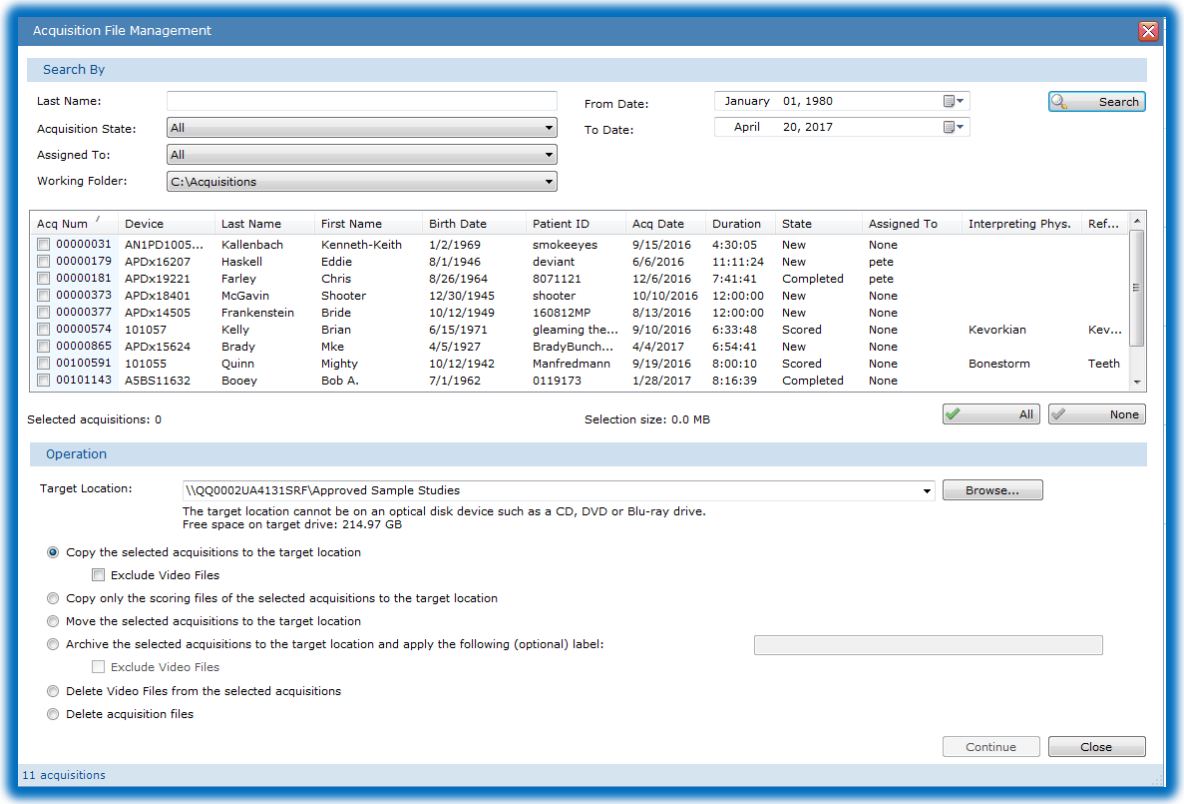
Acquisition File Management for Sleep Study Data

- Use the Working Folder icon to create user-specified locations that will be used as the Source and Target folders when moving sleep study data in Acquisition File Management.
- Use Acquisition File Management to search for a study.
- Use Acquisition File Management to copy, move, delete or archive studies.
- Use Acquisition File Management to delete video files from studies.

PHILIPS

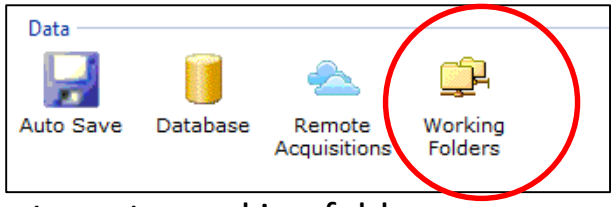
What is Acquisition File Management?

The Acquisition File Management window allows you to search, copy, move, or archive existing acquisition files to user-specified locations. The source folder for this operation must be a Sleepware G3 ‘working folder’.



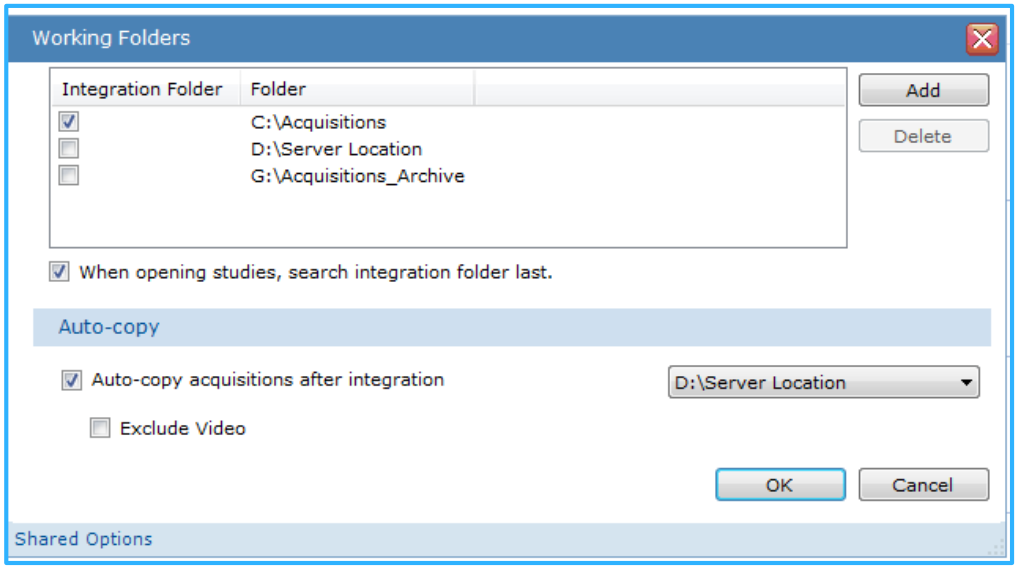
PHILIPS

Working Folders



Before using Acquisition File Management, you must first create working folders.

A working folder is a 'folder location' where studies are held after collection. Typically, a sleep lab has working folders set up so that the integration location is set to the local computer's C drive, and then automatically back up to a server location. The server location is where studies will be accessed for scoring and review. Once a study is scored and reviewed, it can then be moved to a permanent storage location using Acquisition File Management.

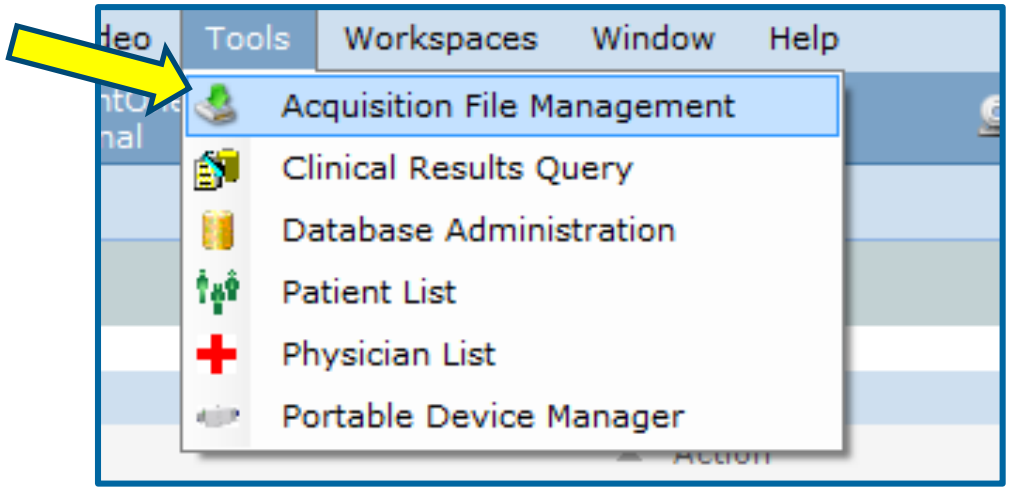


Setting a local folder (C:\Acquisitions) as the integration location is more of a safety measure for collection in cases where the server may be offline or unavailable during a study. Studies can, and should be deleted from the local location once you verify the study is in the backup location for scoring.

PHILIPS

How to Open Acquisition File Management

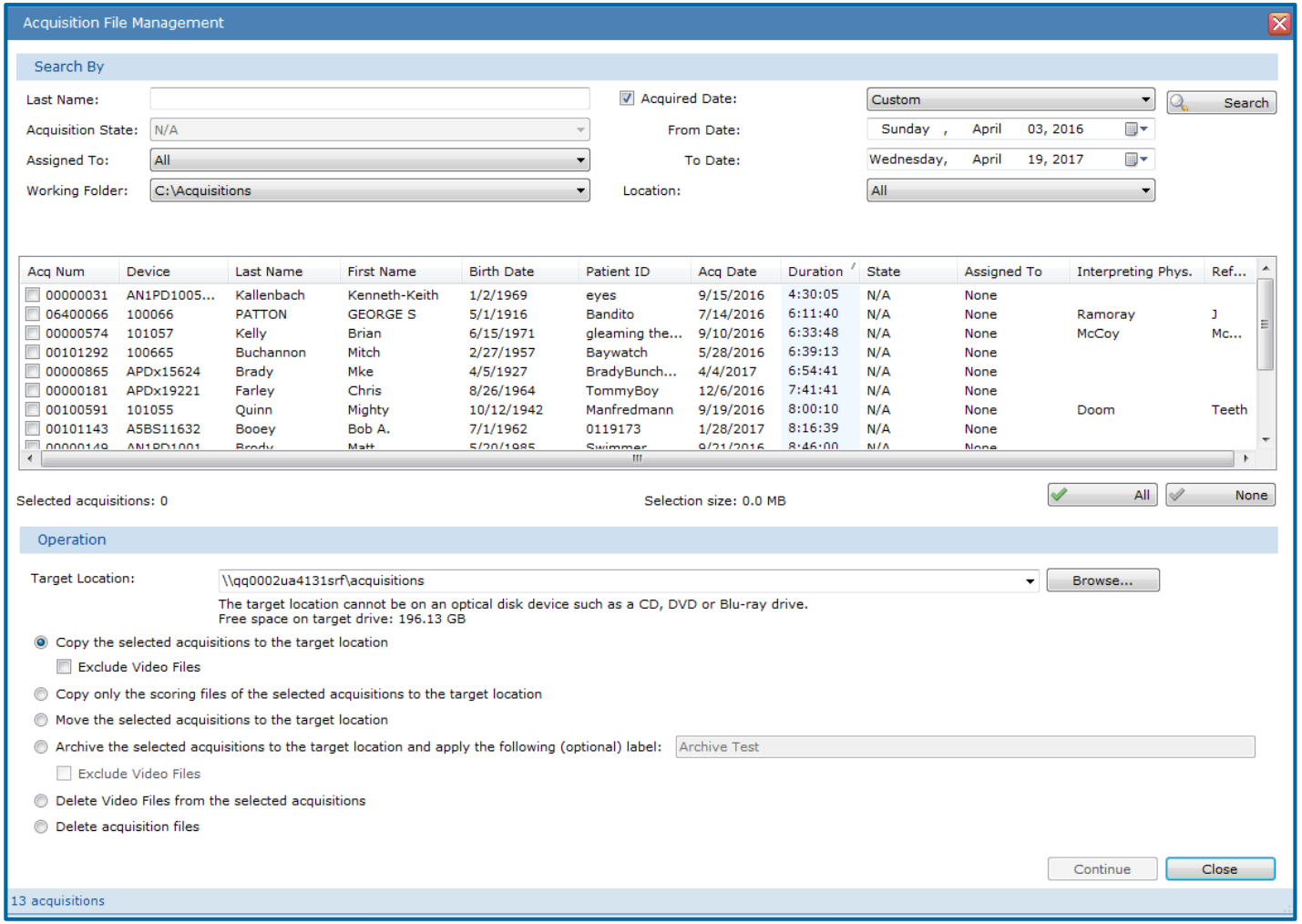
From the Main Menu in Sleepware G3, click on Tools to display a drop-down menu. Select **Acquisition File Management**.



Note: The user account attempting to access Acquisition File Management must have proper group privileges in order to use this tool.

PHILIPS

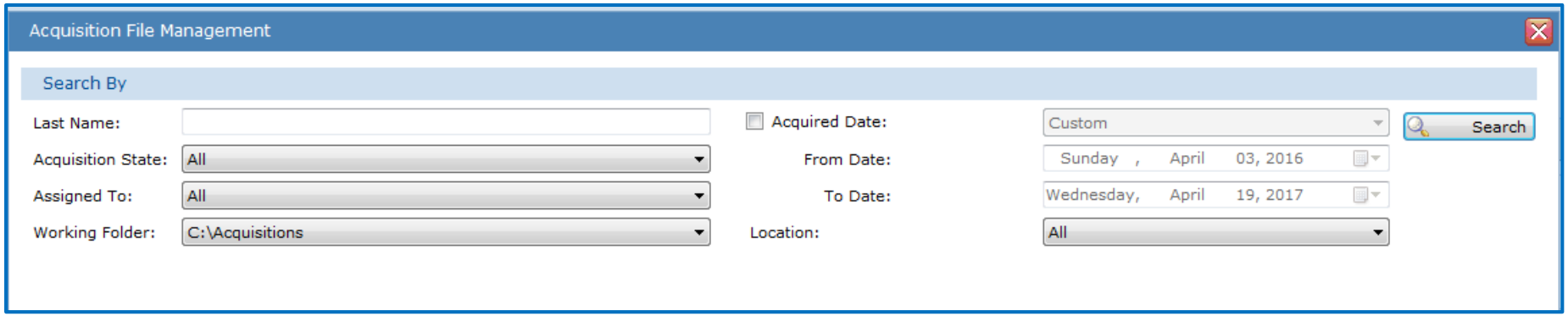
The Acquisition File Management Window Appears



PHILIPS

To Search for Acquisition Files, The Following Filters Can Be Applied:

- To search for an acquisition file, enter a full or partial name in the **Last Name** box.
  - **Note:** You can use a partial name with wildcard character (“*”) to represent any number of characters within the name. Some examples for the name “Johnson” include “Jo*n”, “Jo*”, and “*son”.
- Choose an **Acquisition State** from the list. Choosing “All” means any state. (State Management must be enabled, or else status will say None).
- Select a user from the **Assigned To** list. Choosing “All” means acquisitions assigned to any user.
- **Working Folder** allows a search from a specific working folder.



PHILIPS

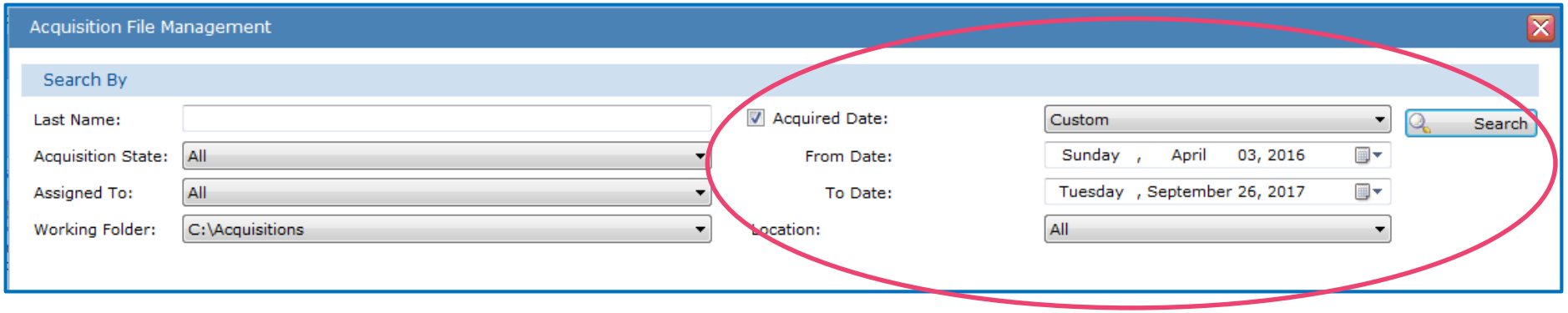
To Search for Acquisition Files, You May Select And Apply Any Or All Of The Following Search Filters:

- Check **Acquired Date** to activate search by a custom date range.

  When searching by date range:

  Check “Acquired date” to activate search by date range
  Select a **From Date** from the list
  Select a **To Date** from the list

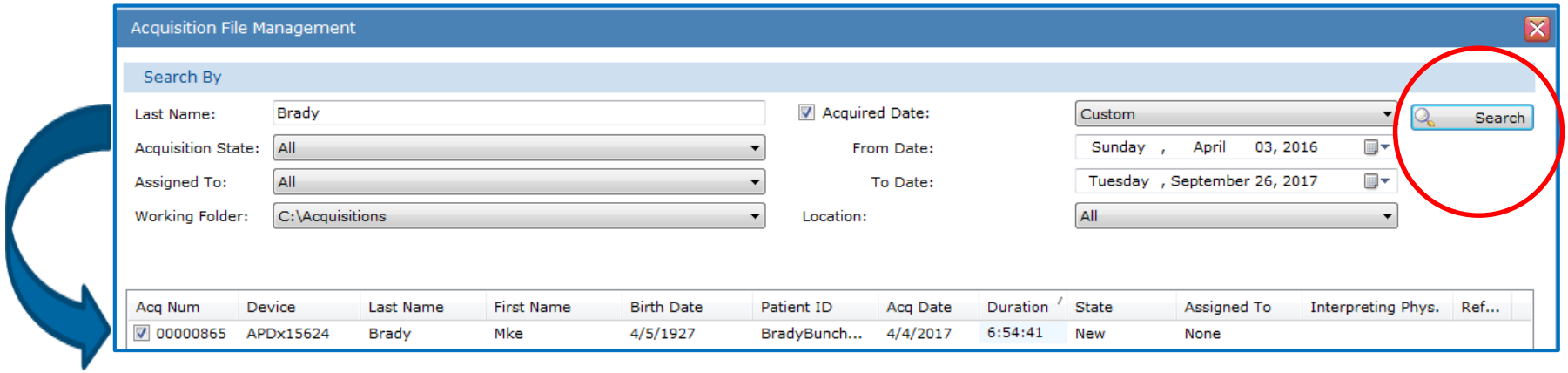
- Select a **Location** from the list. (Locations must first be set up using the Locations settings icon on the Configuration Page)



PHILIPS

Search for Acquisition Files

Once the Search function is executed by clicking on the **Search** button, all acquisitions satisfying the search criteria will appear.



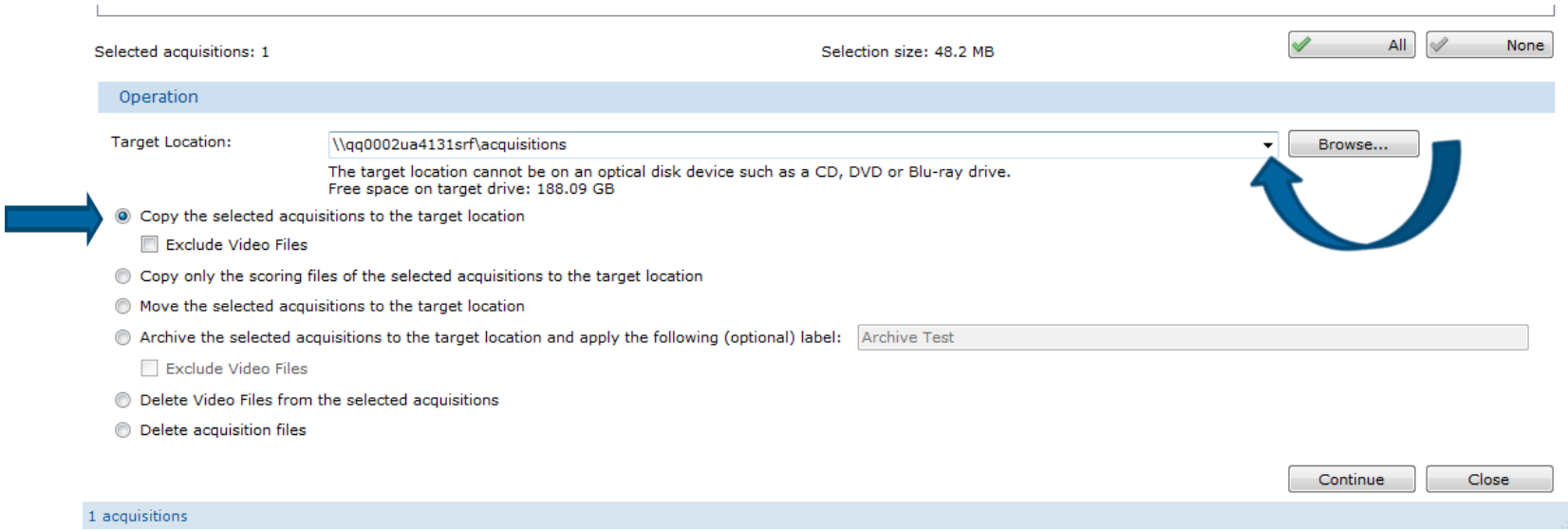
Note: Columns can be sorted in ascending or descending order by clicking on the corresponding column header.
Acquisitions that have been previously archived are not shown.

PHILIPS

To Copy Acquisition Files

First select the **Target Location***: You can select an existing Sleepware G3 working folder via the list. If you do not want to use a working folder as the target you can enter the path to a destination folder in the Target Location box, or click the **Browse** button to navigate to the destination folder.

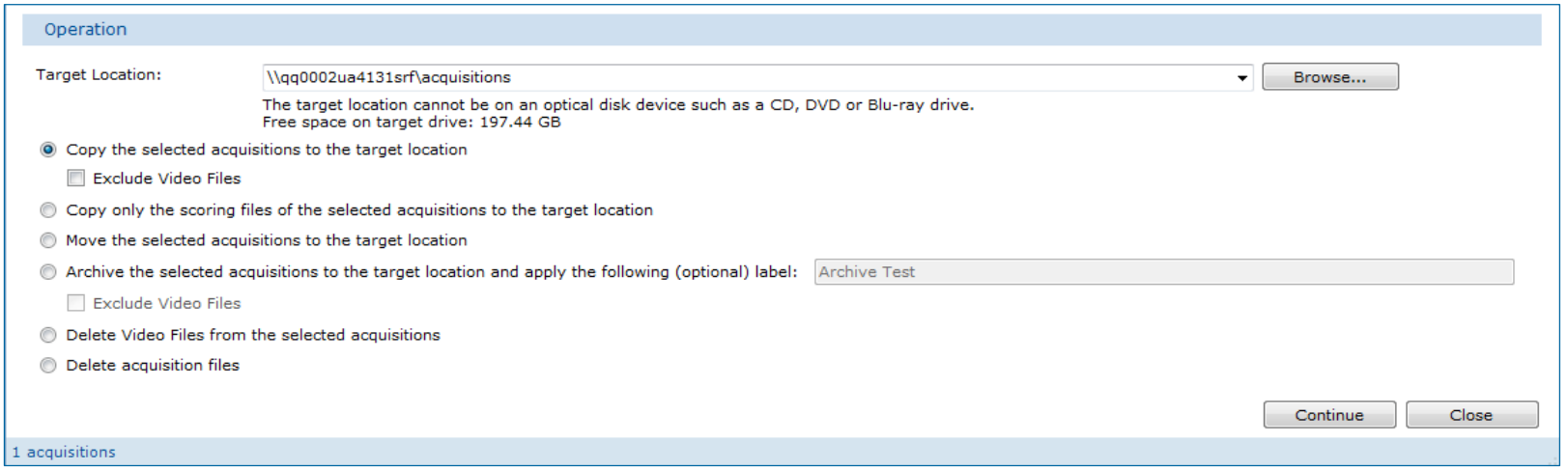
*The target location cannot be on an optical disk such as a CD, DVD or Blu-ray.



PHILIPS

Copying Acquisitions

To copy acquisitions, select the option labeled **Copy the selected acquisitions to the target location**. This places a copy of the selected acquisitions in the target location and ***does not*** delete the original files.



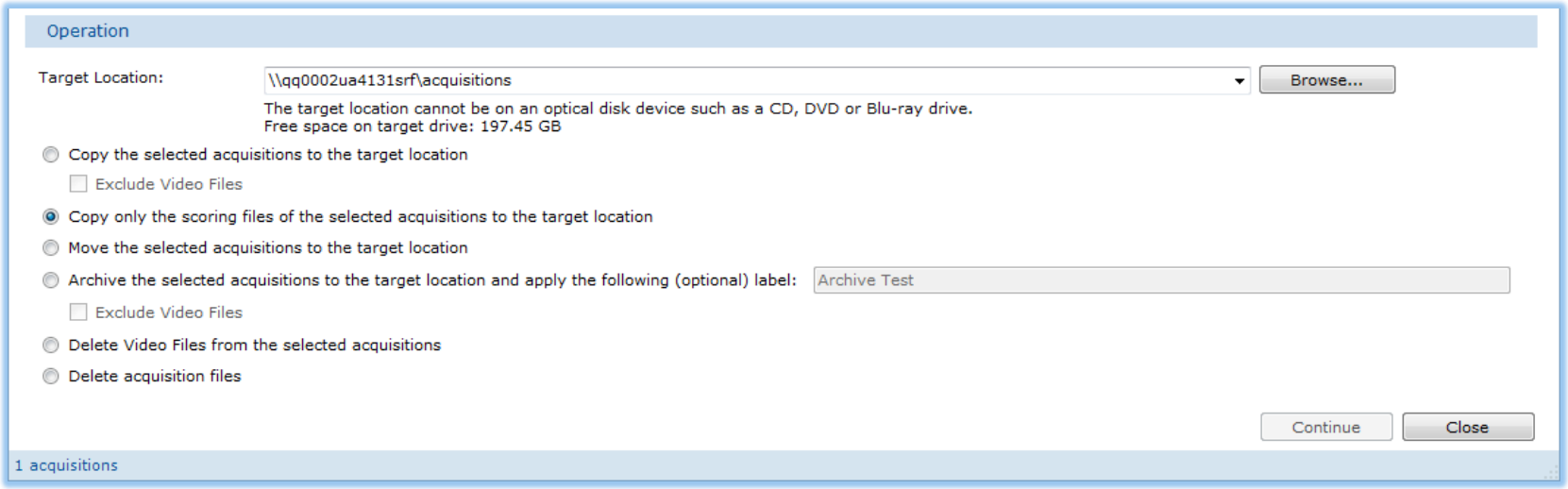
Selecting **Exclude Video Files** causes the copy operation to ignore video files that may exist with the acquisition.

PHILIPS

Copying Scoring Files Only

To copy only the scoring files of an acquisition, select the option labeled **Copy only the scoring files of the selected acquisitions to the target location.**

You would select this choice if the record on the target location has already been scored, but additional scoring changes were made later.



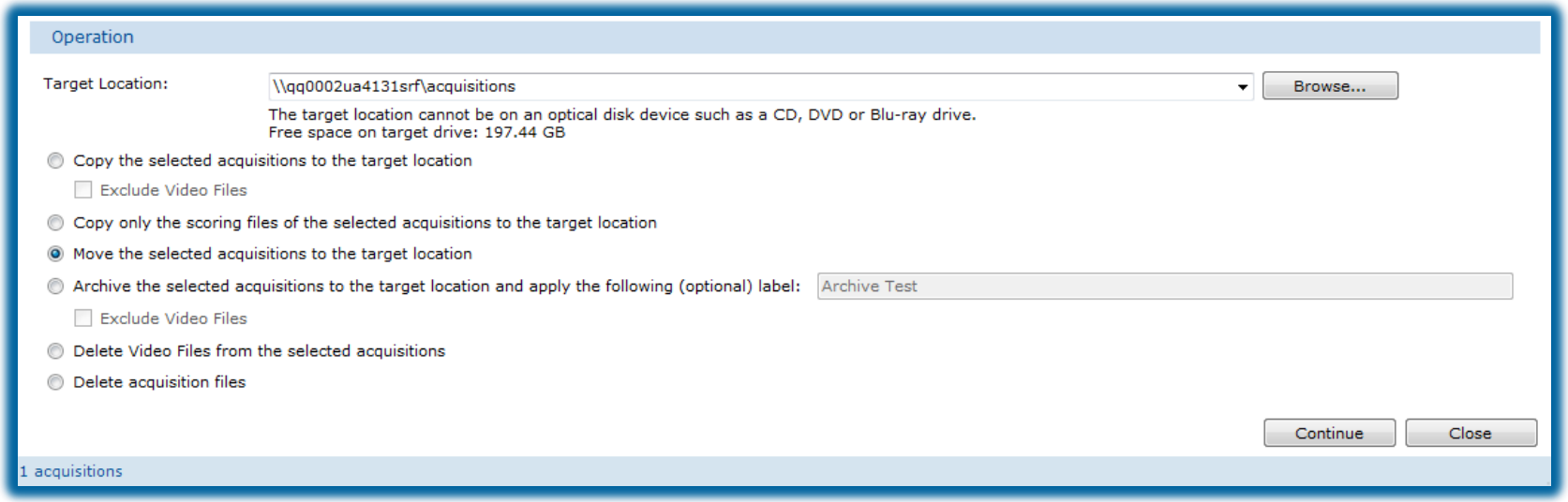
Note: This feature overwrites the scoring at target location from source. Be 100% sure the source is the latest version of scored data.

PHILIPS

Moving Acquisitions

To move acquisitions, select the option labeled **Move the selected acquisitions to the target location**.

This ***moves*** the selected acquisition files to the target location then deletes the original on the source location after it is moved.

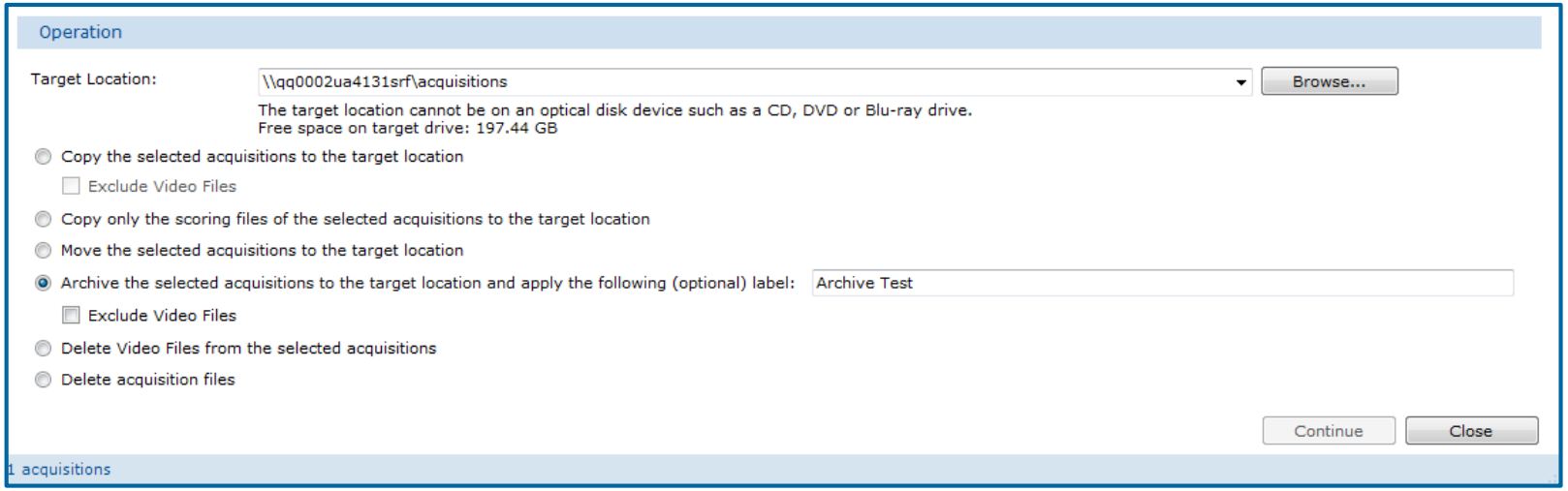


PHILIPS

Archiving Acquisitions

To archive acquisitions, select the option labeled **Archive the selected acquisitions to the target location and apply the following (optional) label**.

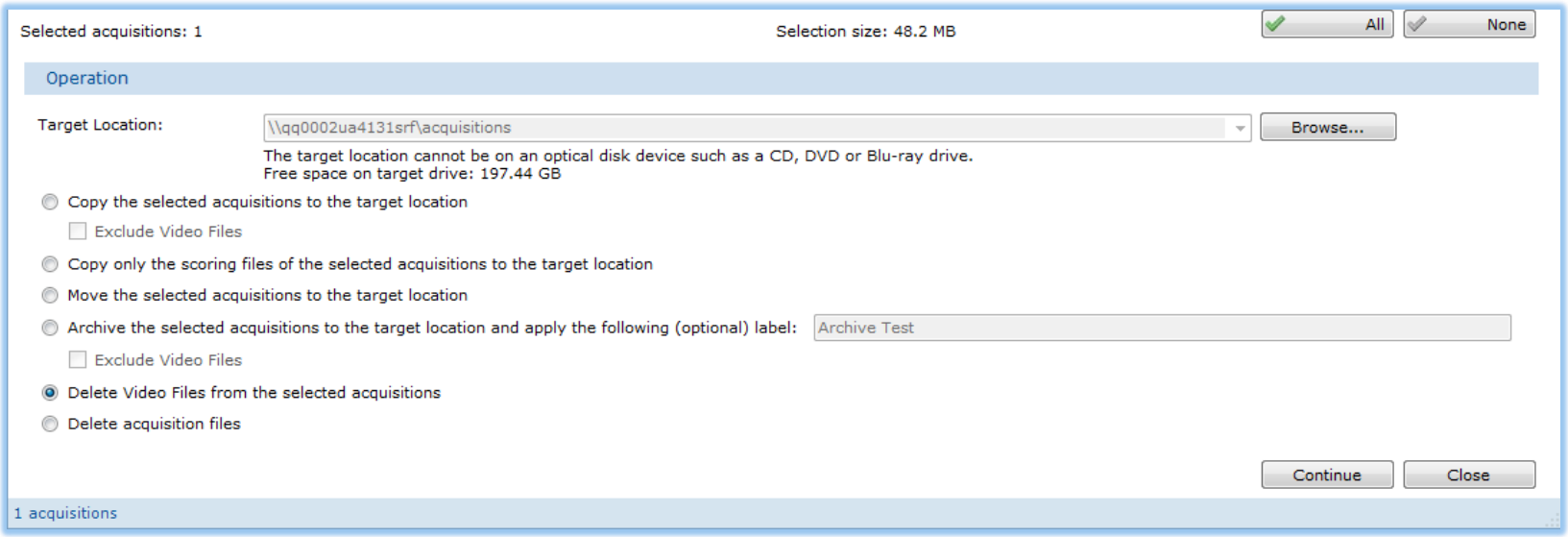
This copies the selected acquisition files to the target location, then deletes the originals after the copy. This function also adds a user-specified archive label and computer-generated archive date to that acquisition's record in the database. By default, an acquisition that has an archive label and date in the database does not appear when searching for acquisitions.



PHILIPS

Deleting Video Files

To delete video files from acquisitions, select the **Delete Video Files from the selected acquisitions** option.

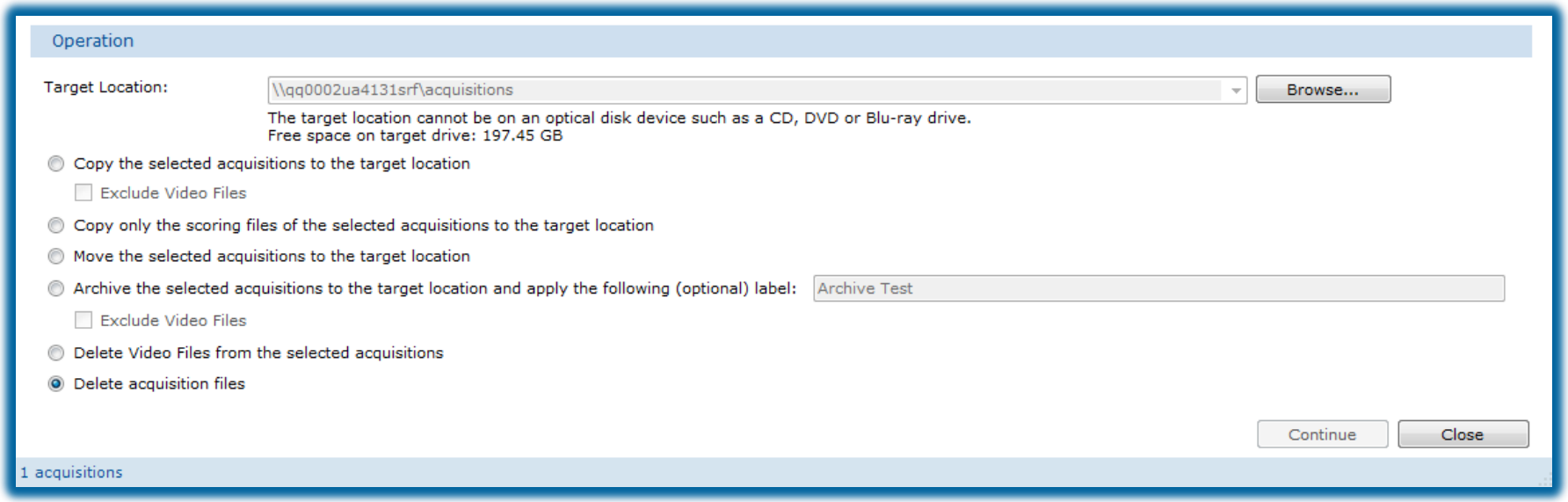


PHILIPS

Deleting Acquisitions

Choosing **Delete Acquisition** allows you to delete acquisition files.

To remove acquisitions files from the selected source folder, select the **Delete acquisition files** option.



The entry in the database for the acquisitions remains and is not removed as part of the delete operation.

PHILIPS

The screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.

Consult Sleepware G3's online help for additional information.

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PHILIPS
RESPIRONICS

Instructions for Changing Video and Audio Options

Sleepware G3

To change audio and video settings:

1. Click "LDx-XXXXXX - Awaiting Acquisition" dropdown on the Device bar (top of window).
2. Click "Audio and Video Settings".
3. If no camera address is present, or you are connecting to a different camera, enter the IP address of the camera (refer to your documentation). There may be a short delay while the camera is detected. If the camera is not detected, check it is powered on and connected to the network.
4. Click the appropriate option for video with audio, video only, or disabled.

To View Video within a Study

1. *Click the video icon on Device bar to view live video.*
2. You will see a green marker below the data on each Panel which represents the current position of the video displayed in the Video Panel.
3. All recorded video is retained with the Study unless you choose to delete it from the Acquisition File Manager.
4. Click and drag in the video window to use the PTZ (Pan/Tilt/Zoom) feature to control the camera.

To Use Intercom

1. *Right click the speaker icon to hear sound from the room (intercom).*
2. *Left click and hold the speaker to use "push to talk" to talk to the patient using a microphone attached to the PC.*

To delete recorded video from a sleep study:

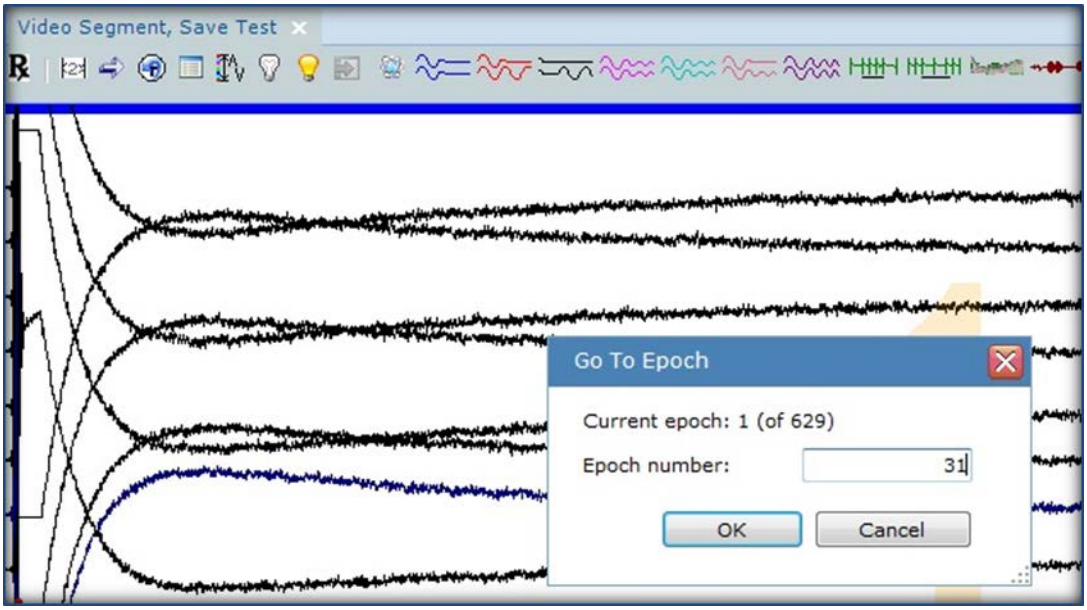
1. Click "Tools" and select "Acquisition File Management".
2. Select the studies in the list that you want to remove ALL video from.
3. Select "Delete Video Files from the selected acquisitions".
4. Click "Continue".

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

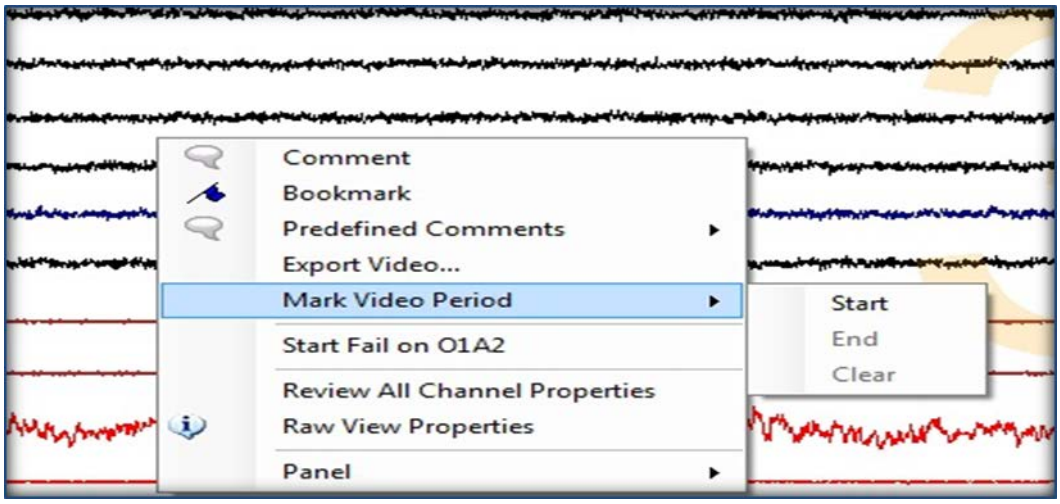
Saving Portions of Video with G3

Make note of the portions of the study in which you want to save video, from epoch to epoch. In this example we will save 2 portions of video: from **Epoch 31 to Epoch 67** and from **Epoch 100 to 145.** To save this Video:

Use hotkey, **Ctrl + G** (Go To Epoch), and type 31 to navigate directly to Epoch 31. Select **OK**.

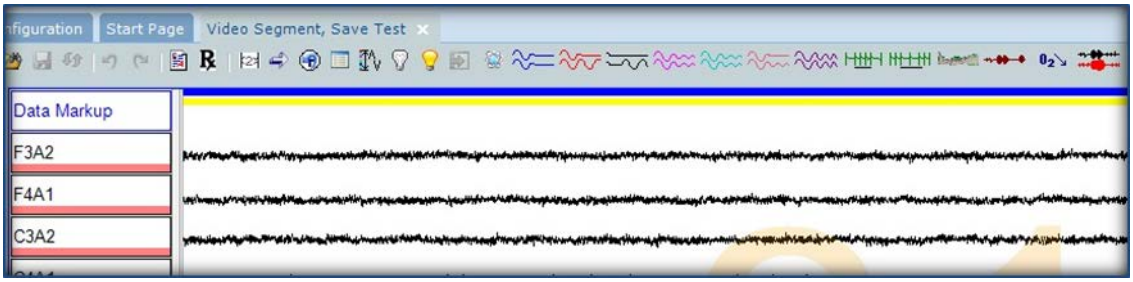


Right Click on the Raw Data Screen and Select **Mark Video Period > Start.**

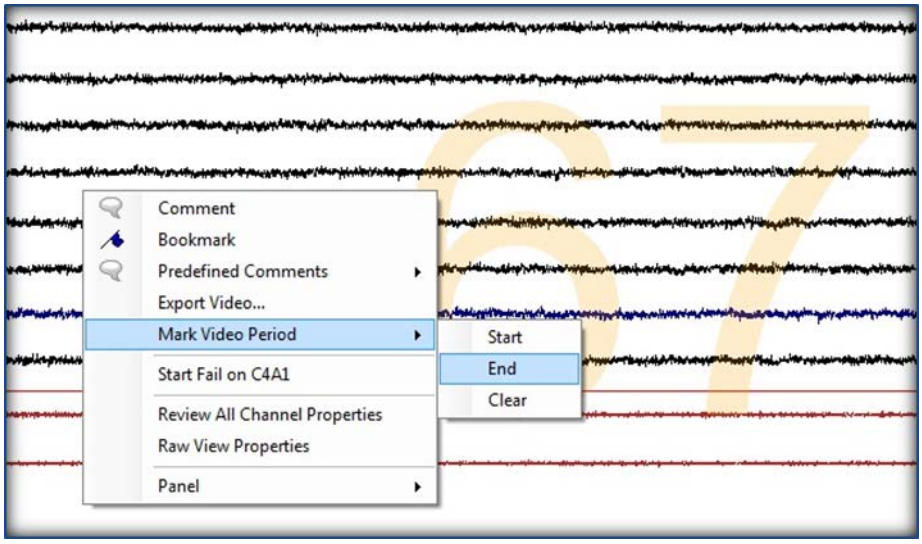


Once Start has been selected, you will see the blue bar you see when video has been recorded ***and*** a yellow to show the Mark Video Period action is in progress.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

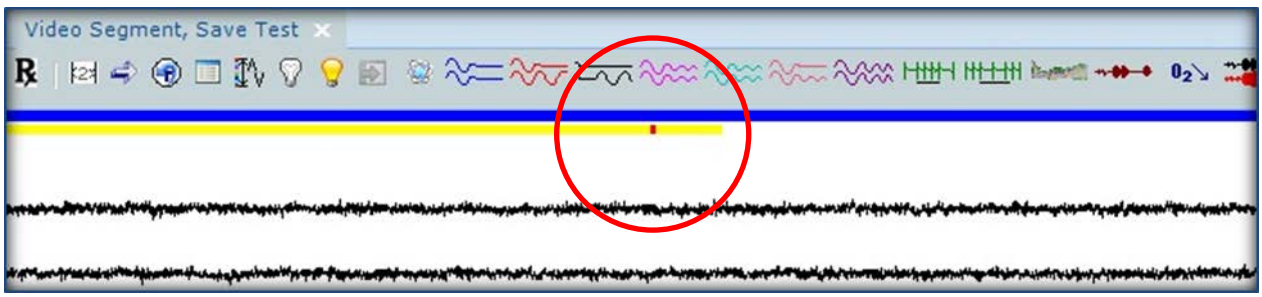


Use Ctrl+G to find epoch # 67 where we will end the video period to be saved. Once there, *right click* on the raw data screen and select **Mark Video Period > End**.

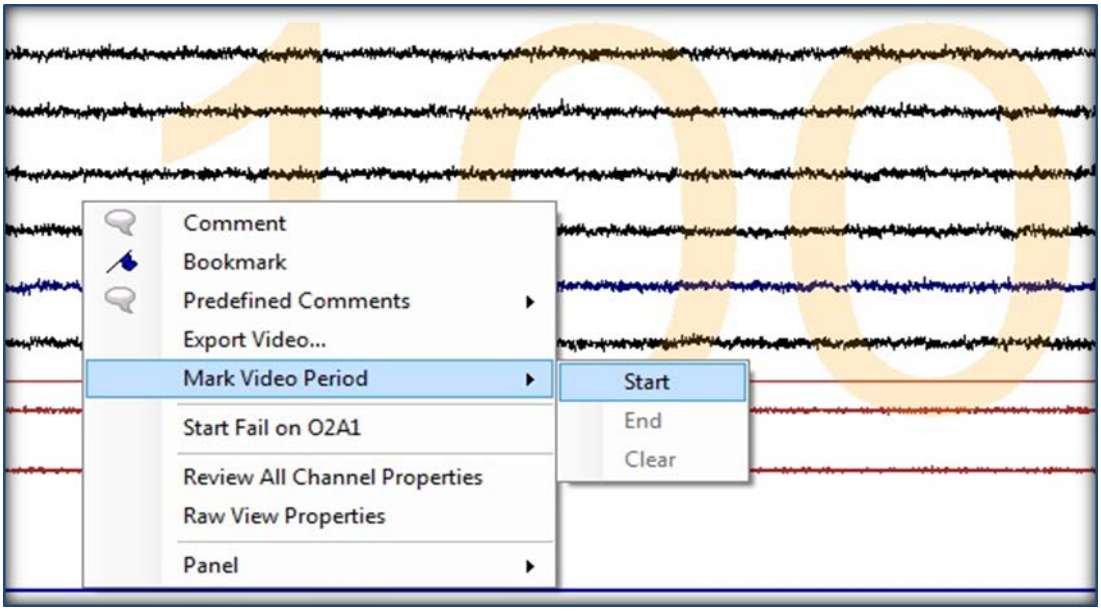


The portion of video from epoch 31 to 67 will be saved. (Note that video files are saved in 5 minute increments, so portions of the video are contained in the folders including epochs 31 to 67 will also be saved).

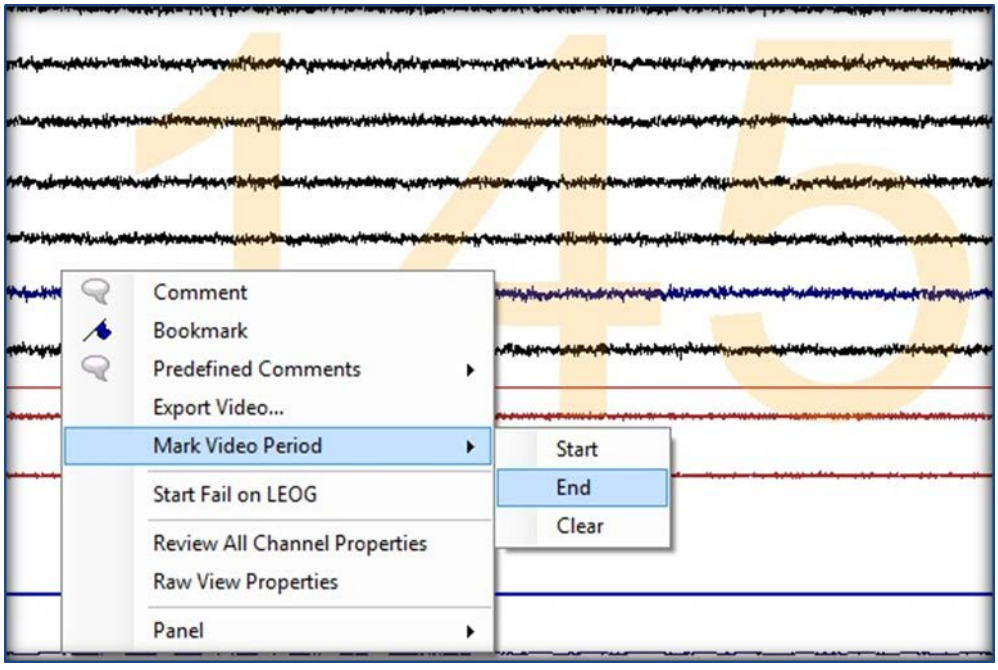
Once the Start and End Period have been selected, a **red indicator** will appear at the beginning and end of the segment. The entire video will remain intact until all video segments are selected in the study.



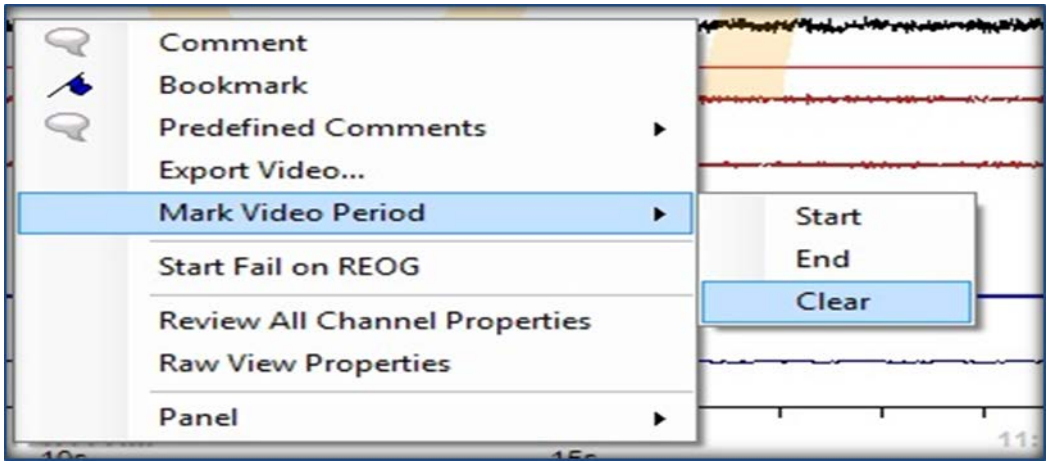
Next we will save the period of video from **epoch 100 to 145**. Use Ctrl + G to find epoch 100. Right click on the raw data screen in epoch 100 and select from the dropdown menu **Mark Video Period > Start.**



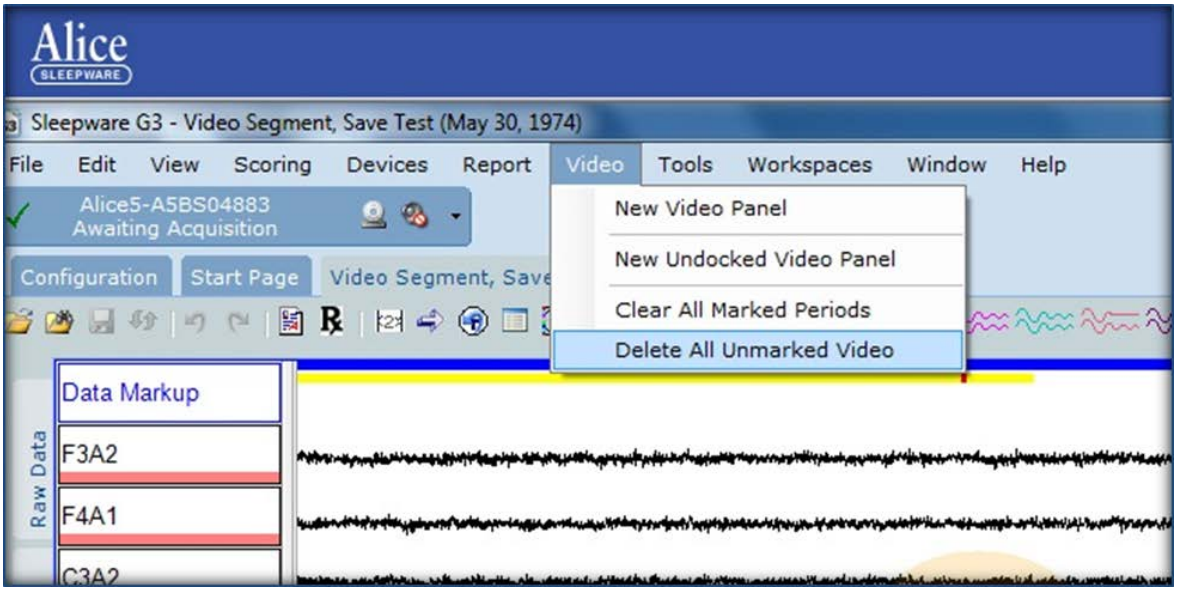
To find our end period, use Ctrl+G to go to epoch 145. At Epoch 145 right click on the raw data screen and select **Mark Video Period > End**.



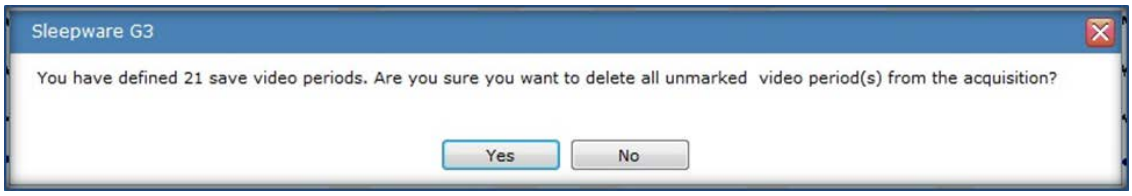
*Note: if you selected an area of video that you did not want to save you can select **Clear** from the dropdown list to delete the last portion of video that was saved.



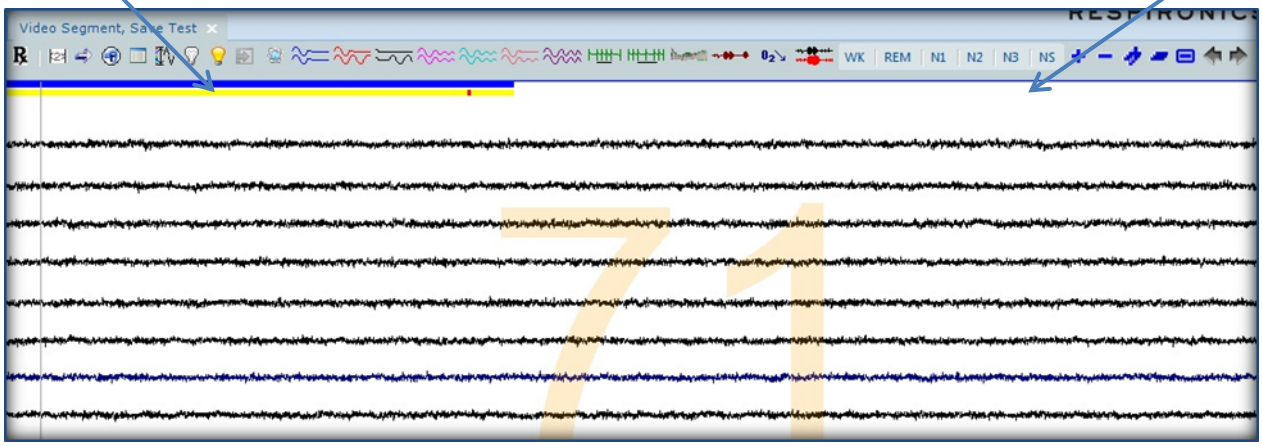
Once all portions of video have been selected, Select **Video** from the Toolbar. Next, select **Delete All Unmarked Video** from the dropdown menu.



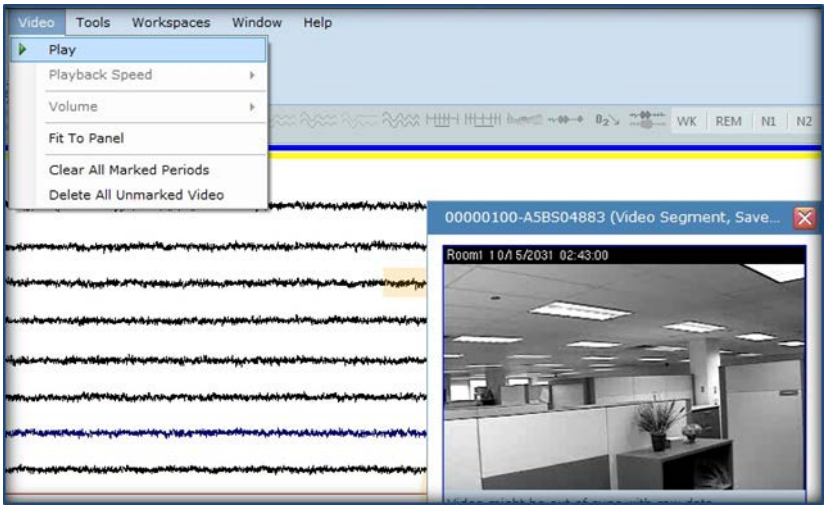
You will receive a message to confirm deletion of unmarked video. Select **Yes** to continue or **No** to cancel.



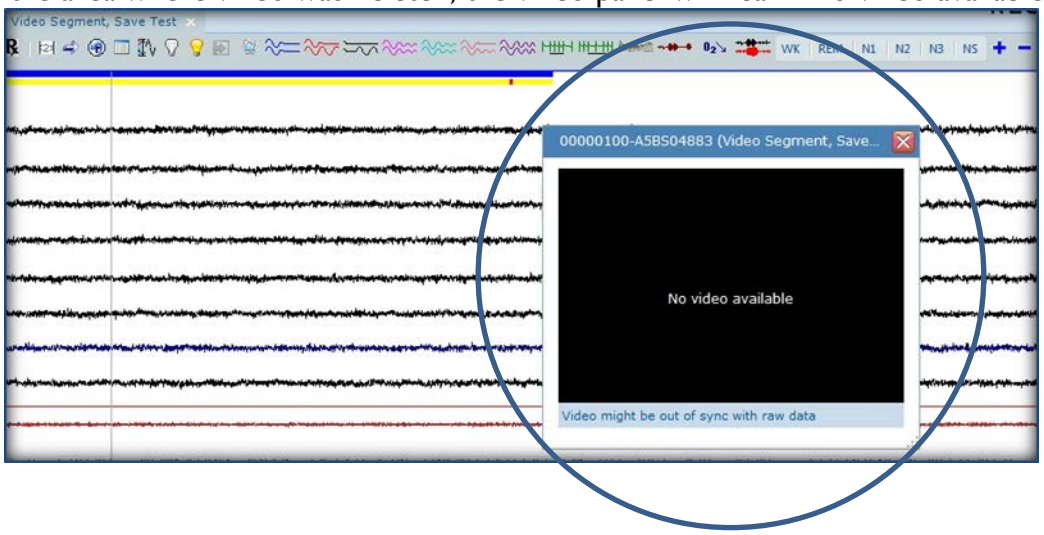
Once you have deleted the video, you will notice a blue and yellow bar in areas where the video was saved. There will be no video bars in the areas of the study in which video was deleted.



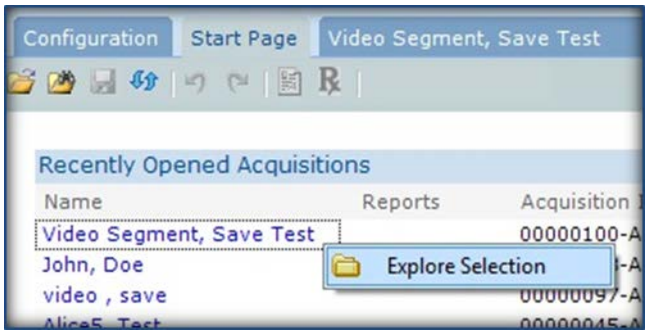
In the area of the study in which the video exists, the video window will appear and the option to play is available.



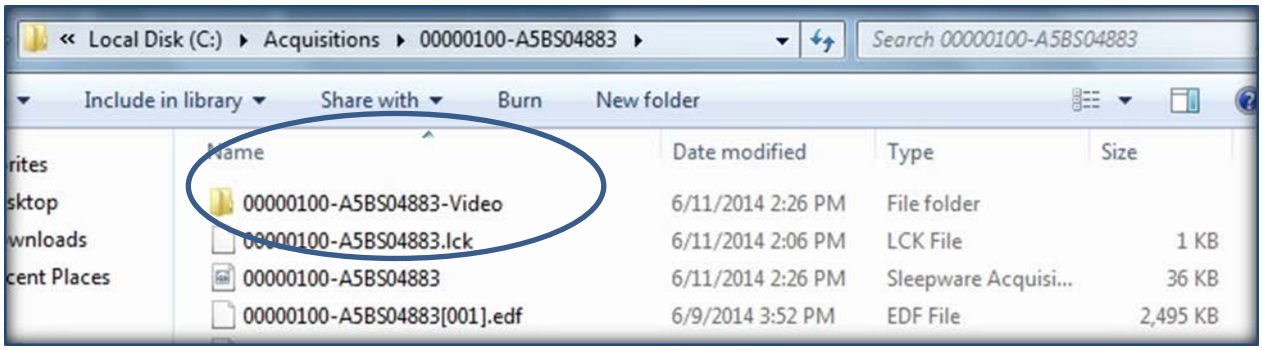
In the area where video was deleted, the video panel will read "No video available".



To view the video files in the acquisition folder, click on the Start Page. Right click on the patients name and the left click on **Explore Selection**.

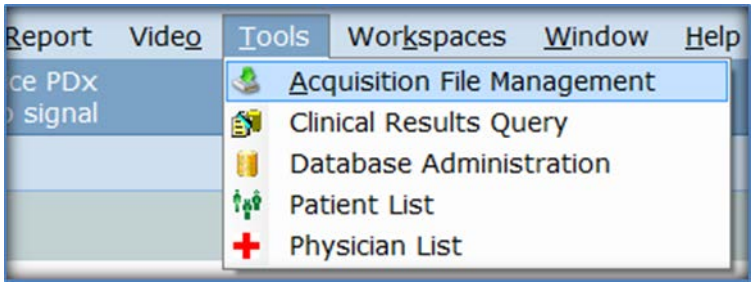


This action will take you into the acquisition folder. Double left click on the Video Folder to see the video files.

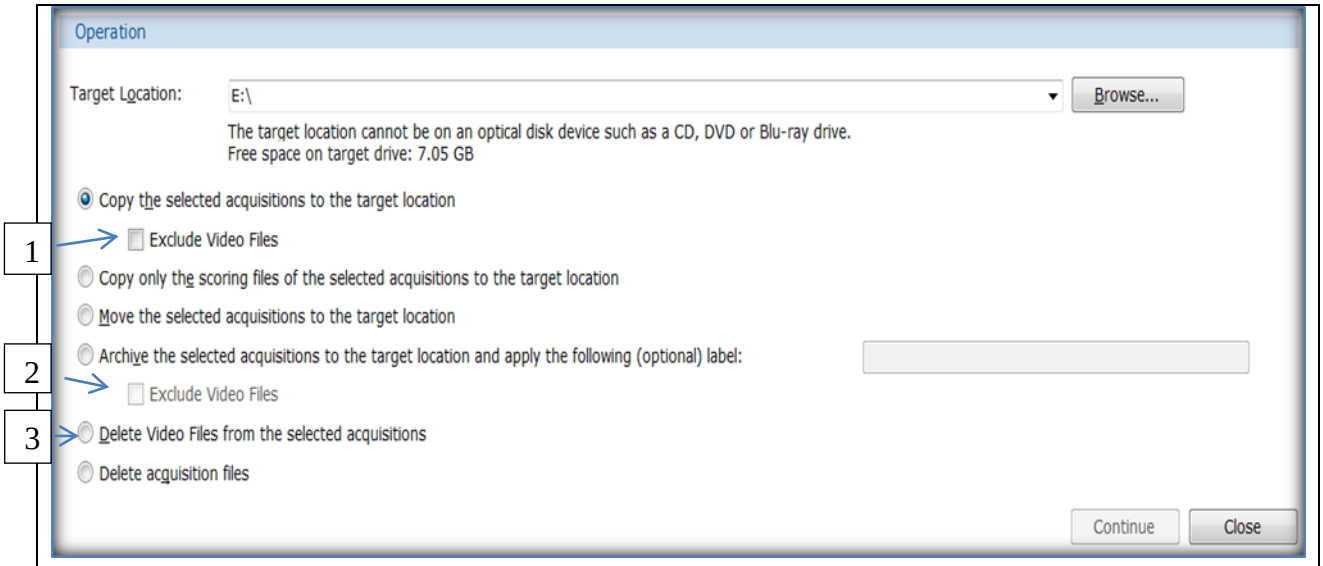


<u>Video Files</u>: Only Saved video files will remain in this folder. Video files that have been deleted will be permanently removed

If using acquisition file management to manage and archive studies, be mindful of video options:



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.



1. When copying acquisition to a backup location, you can place a check in box to exclude the entire video folder during transfer, including video that was saved.
2. Same as option 1 when archiving to an alternate target folder.
3. Allows the user to delete remaining video from the acquisition folder.

Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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G3 Training Module

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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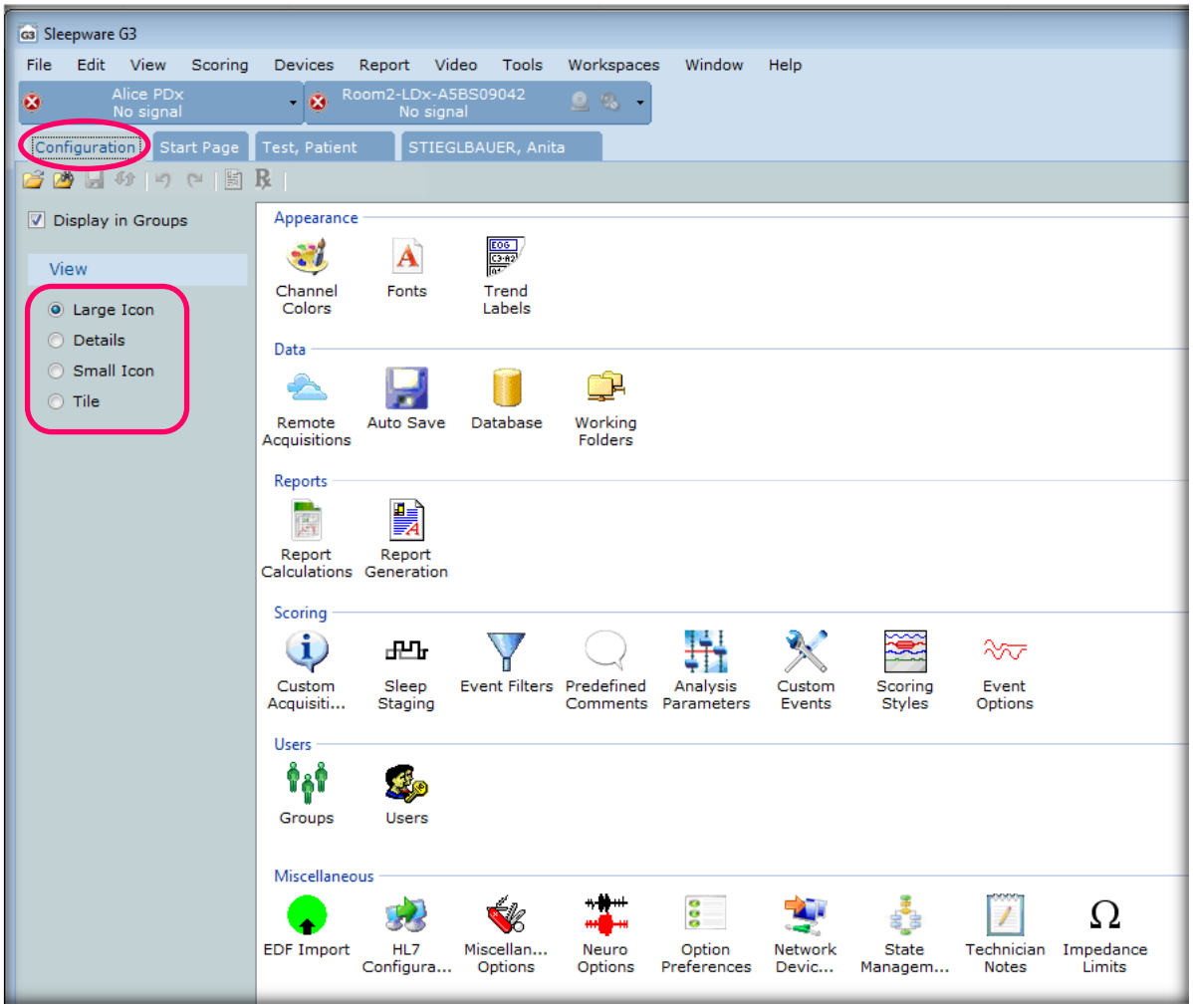
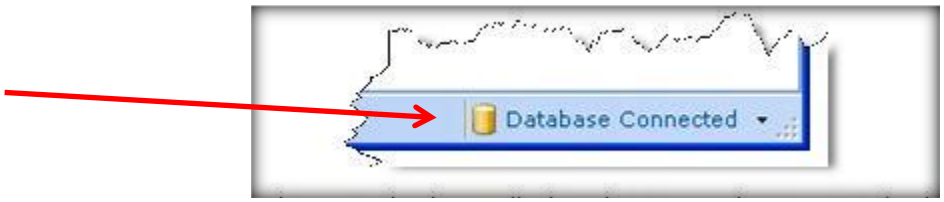
CONFIGURATION TAB

This area displays all the application options that can be configured. The options can be displayed in Groups (by clicking the Display in Groups check box) and as a list or tiled, using large or small icons, and with or without associated details/descriptions (by clicking on one of the View options).



The status bar at the bottom of the configuration tab area displays the database connection status.



The status is always displayed. You can choose to work without being connected to the database by clicking the down arrow and choosing **Work Offline.** When you work offline, all functions within Sleepware that rely on the database, such as patient and physician lists, functions associated with users and groups, acquisitions that are listed in the My Acquisitions area of the Start Page, etc. are not functional until you return to working online.

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CHANNEL COLORS, FONTS, TREND LABELS

Channel Colors

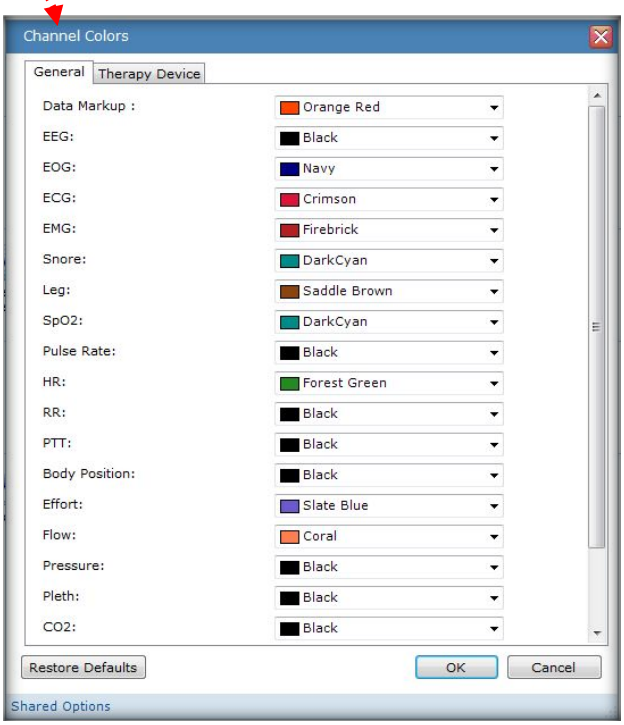
The Channel Colors window provides a channel color select box for each channel type. Changes made are stored and immediately available on all open applicable panels.

The Channel Colors window has two tabs: General and Therapy Device. In either tab, the channel colors have default values upon installation of the system. Clicking the **Restore Defaults** button resets the colors to the default values.

To change the channel colors:

1. Click the **Configuration** tab.
2. Double-click on the **Channel Colors** link.

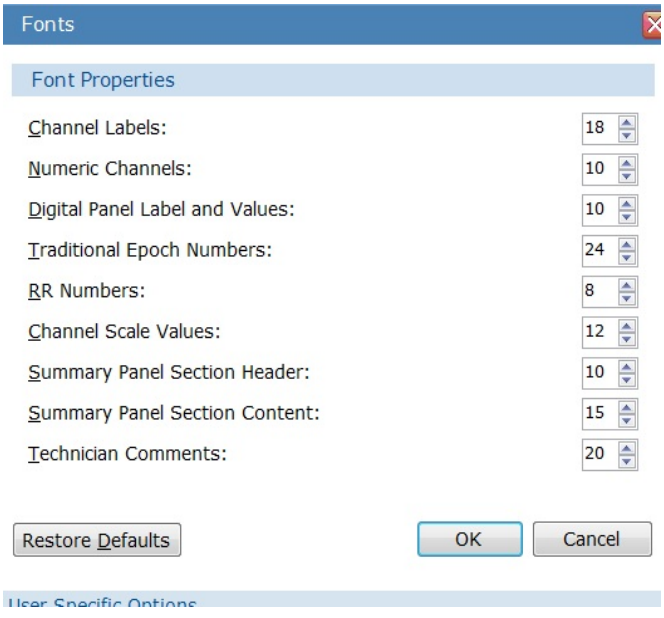
   The Channel Colors window opens.
3. Select/change a color for any of the channels listed.
4. Click **OK** to save your changes.

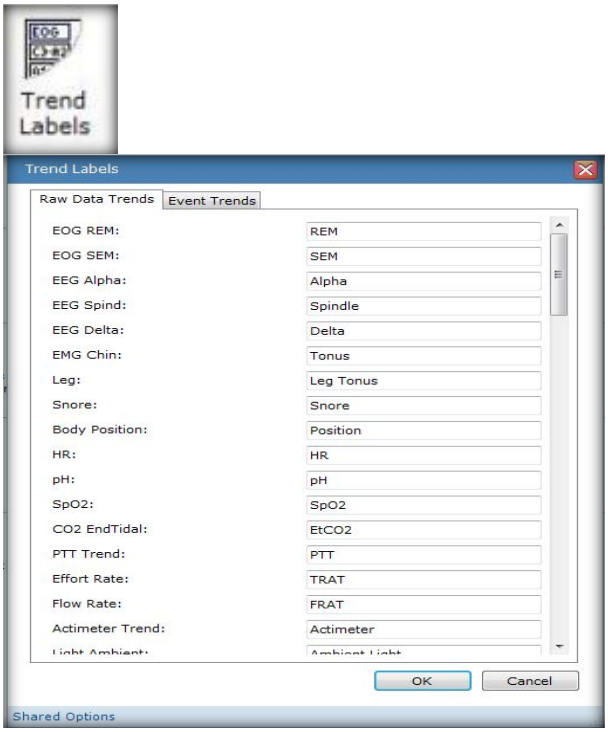


Fonts

Fonts

The Fonts window allows you to set the maximum font size for channel labels. The maximum size will be used if space permits; otherwise, the labels will be scaled accordingly. The minimum size is 5 points and maximum size is 24 points. If configured as a shared option, the fonts will be viewed/modified as shared settings. If configured as a user-specific option, the fonts will be viewed/modified as user-specific settings.





Trend Labels

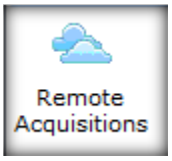
The Trend Labels window provides the ability to view/modify the trend labels used in the trend panel and the reports. Changes made are stored and immediately available on all open applicable panels.

The Trend Labels window has two tabs: **Raw Data Trends**, **Event Trends**.

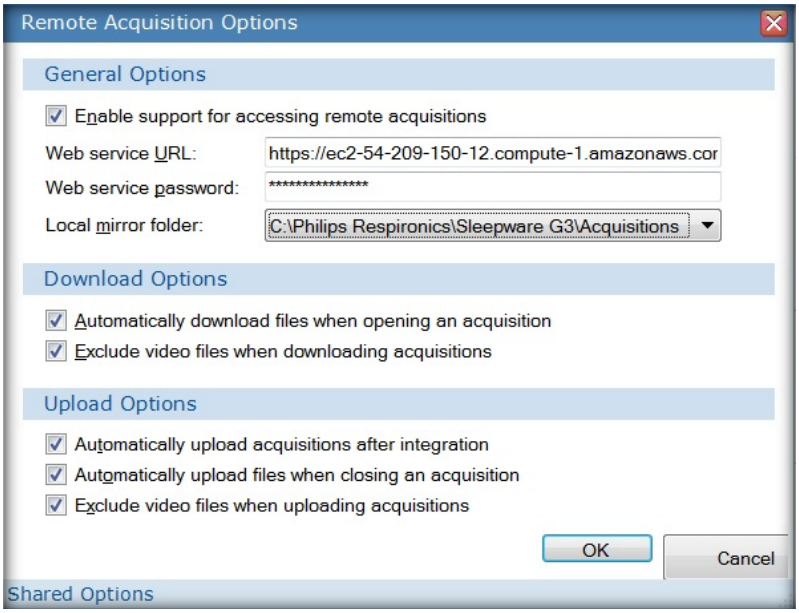
In either tab, the trend labels display default values assigned upon installation of Sleepware and are shown to the right of the trends. These values are displayed in trend panels and reports. You can overwrite the default values by typing your own in values in place of the defaults.

PHILIPS

REMOTE ACQUISITION OPTIONS

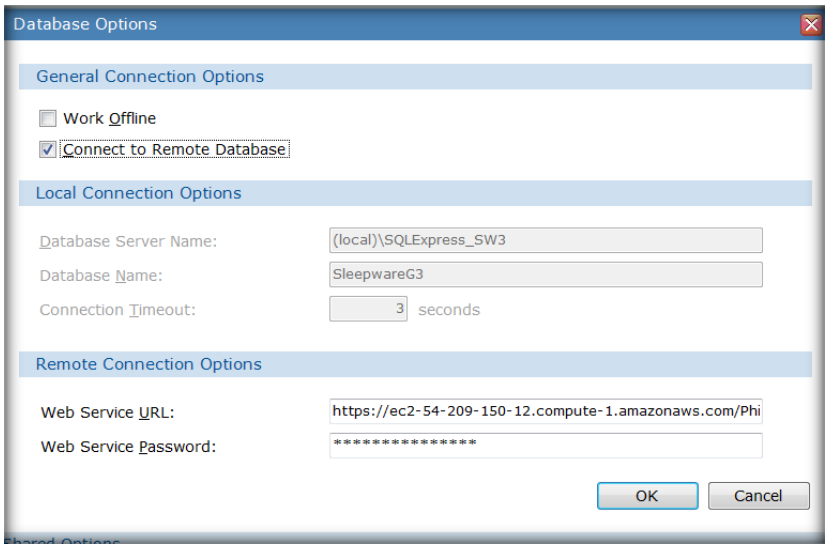


The Remote Acquisitions Options window allows you to enable Sleepware G3 to store acquisitions on a cloud server.



Sleepware G3 Cloud Services is an optional feature in which customers may utilize for storing and sharing full PSG and HST data. The G3 Cloud will allow users to easily access sleep data remotely. The Sleepware G3 database can be stored on the cloud server.

If using cloud services to house your database, you must select ☑ Connect to Remote Database under the database icon on the configuration page:



PHILIPS

AUTO SAVE

Auto Save

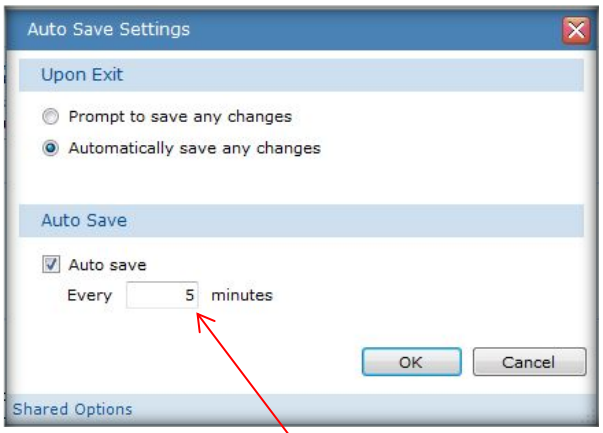
The Auto Save Settings window provides an interface for letting you specify how Sleepware handles saving information upon exiting.

To access the Auto Save Settings window:

1. Click the **Configuration** tab.
2. Double-click the **Auto Save** link.

   The Auto Save Settings window opens.

   By default, Sleepware automatically saves any changes upon exit, and is configured to perform an auto save every five minutes. You can also configure the time interval between saves.
3. If you do not want auto save features, you can select **Prompt to Save** and change and/or deselect the **Auto Save** check box.
4. Click **OK** to save the changes and close the window.



You can also choose how frequently data is saved during scoring.

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DATABASE

Use of the database is optional, but highly recommended. The database is used to store the patient list, physician list, acquisition identification information, and all information related to user and group settings. The database makes it easy to locate specific patients, physicians, and acquisitions using its built-in search mechanism.

You can choose to work without the database by clicking the database drop-down arrow in the bottom-right corner of your screen and selecting **Work Offline**.
By default, a database instance based on Microsoft's SQL Server Express technology is installed with Sleepware. Use of the database is optional, but strongly suggested. Without the database you cannot search for patients, physicians, or identifying acquisition information.
Follow these steps to access the database options:

1. Double-click the **Database** icon under the **Configuration** tab.

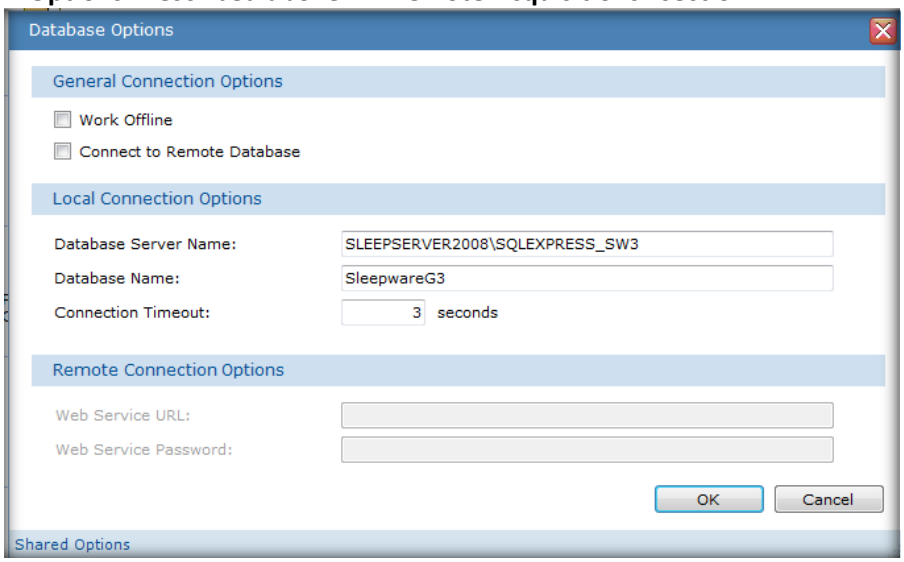
The Database Options window opens and allows you to specify whether a database is to be used and to change specific details about the database.

2. Click the **Work Offline** option if you prefer to not use a database; *do not* click the **Work Offline** option if you want to use the database. If you plan to use a cloud-based database, click on the **Connect to Remote Database** option. If this option is selected, the options located in the Remote Connections Options section can be set to their desired values.

Local Connection Options:

The **Database Server Name** shows the machine name and the database instance name.
The **Database Name** is established during Sleepware installation and the path shown is the default location. You may change it at any time.
The default number of seconds to display a **Connection Timeout** message is 3; however, you may change it to a higher or lower value.

Remote Connection Options: **Described above in "Remote Acquisitions" section.**



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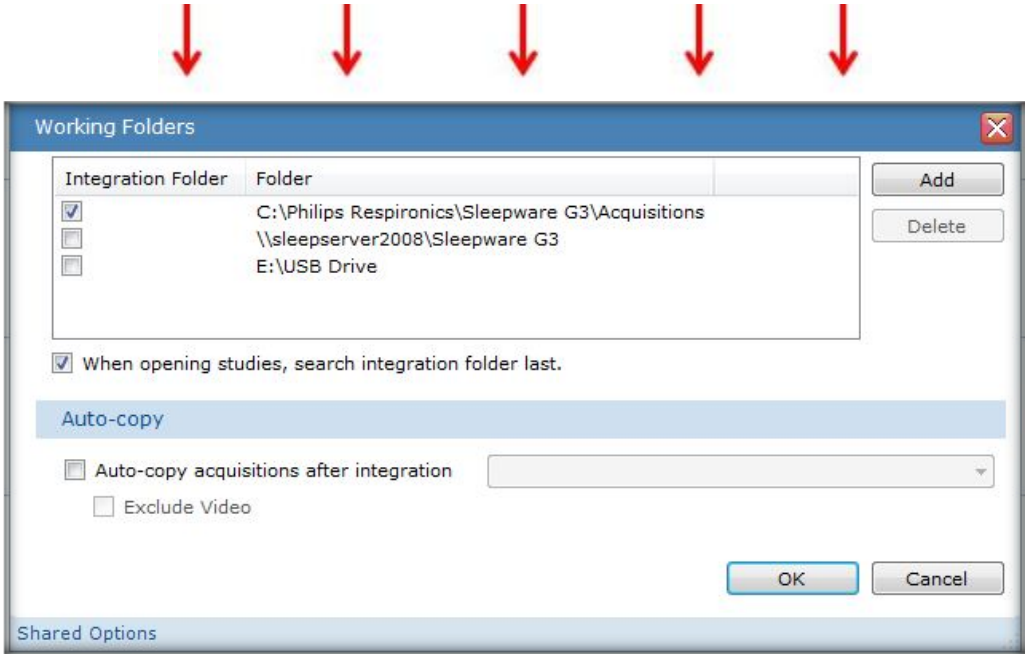
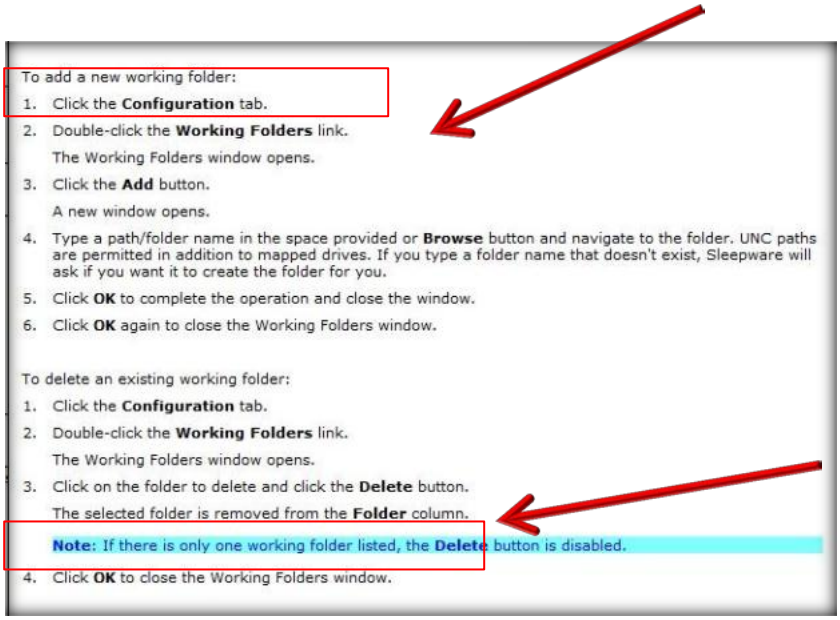
WORKING FOLDERS

The Working Folders window will allow you to select an integration folder for sleep data. This location will be the folder in which your acquisitions are collected and saved. The default integration folder is set to C:\Acquisitions during installation. The Folder column below shows the full path for the working folder selected.

It is often common practice to collect acquisitions in this integration folder on the PC in which the studies are acquired on, and then auto-copy the same acquisition to a shared location. Auto-copy to a central location will allow access to all acquisitions from any sleep computer. See next page for more on Auto-Copy.




To add a new working folder:

1. Click the **Configuration** tab.
2. Double-click the **Working Folders** link.
   The Working Folders window opens.
3. Click the **Add** button.
   A new window opens.
4. Type a path/folder name in the space provided or **Browse** button and navigate to the folder. UNC paths are permitted in addition to mapped drives. If you type a folder name that doesn't exist, Sleepware will ask if you want it to create the folder for you.
5. Click **OK** to complete the operation and close the window.
6. Click **OK** again to close the Working Folders window.

To delete an existing working folder:

1. Click the **Configuration** tab.
2. Double-click the **Working Folders** link.
   The Working Folders window opens.
3. Click on the folder to delete and click the **Delete** button.
   The selected folder is removed from the **Folder** column.
   Note: If there is only one working folder listed, the **Delete** button is disabled.
4. Click **OK** to close the Working Folders window.

PHILIPS

AUTO-COPY OPTIONS

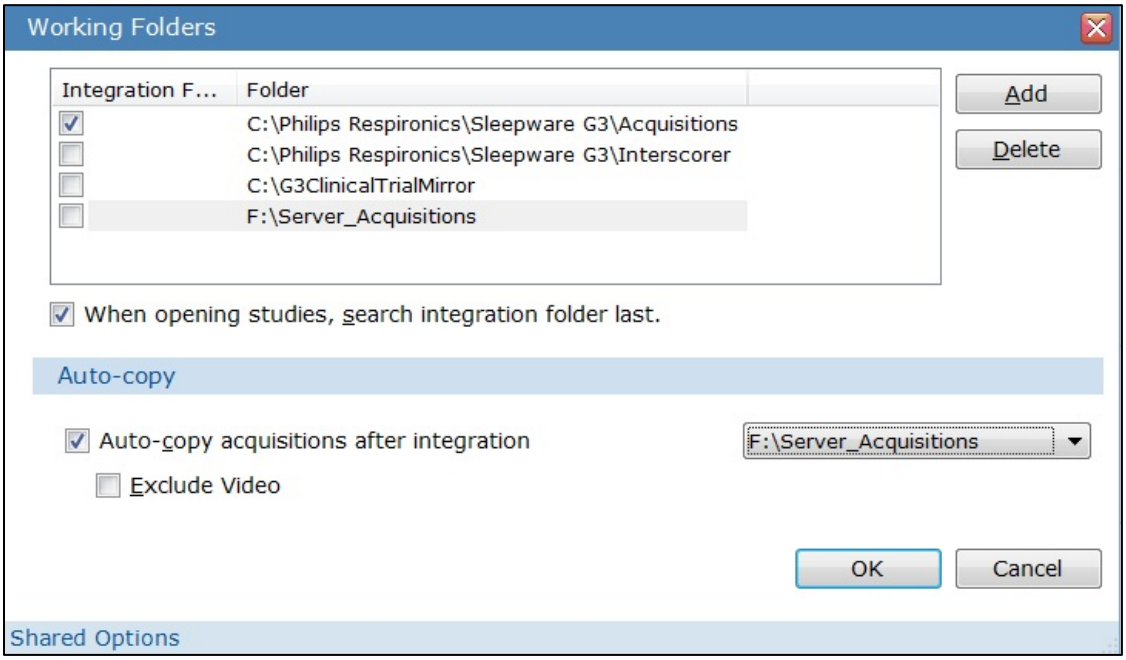
To automatically copy a sleep study to a Server location, you must first create the path for the server location as a working folder. Once created, place a check mark in box to select ☑ "Auto-copy acquisitions after integration." From the drop-down menu, select the server folder/path that was created. In this case, it is best place a check mark where it says: ☑ When opening studies, search the integration folder last. This will allow Sleepware to search the auto-copy folder more efficiently.

Auto-copy Options

1. (Optional) Click the **Auto-copy acquisitions during integration** option to automatically copy acquisitions to the folder you select in the associated drop-down list.

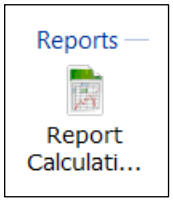
   The copy operation occurs when an acquisition is stopped and is integrated to the working folder designated as the integration folder. The acquisition is then also copied to the specified working folder.

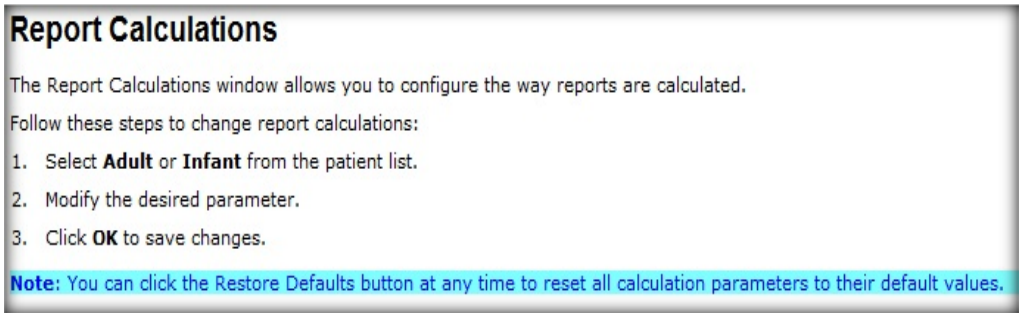
2. (Optional) Click the **Exclude Video** check box to perform the acquisition copy but without any associated video files.

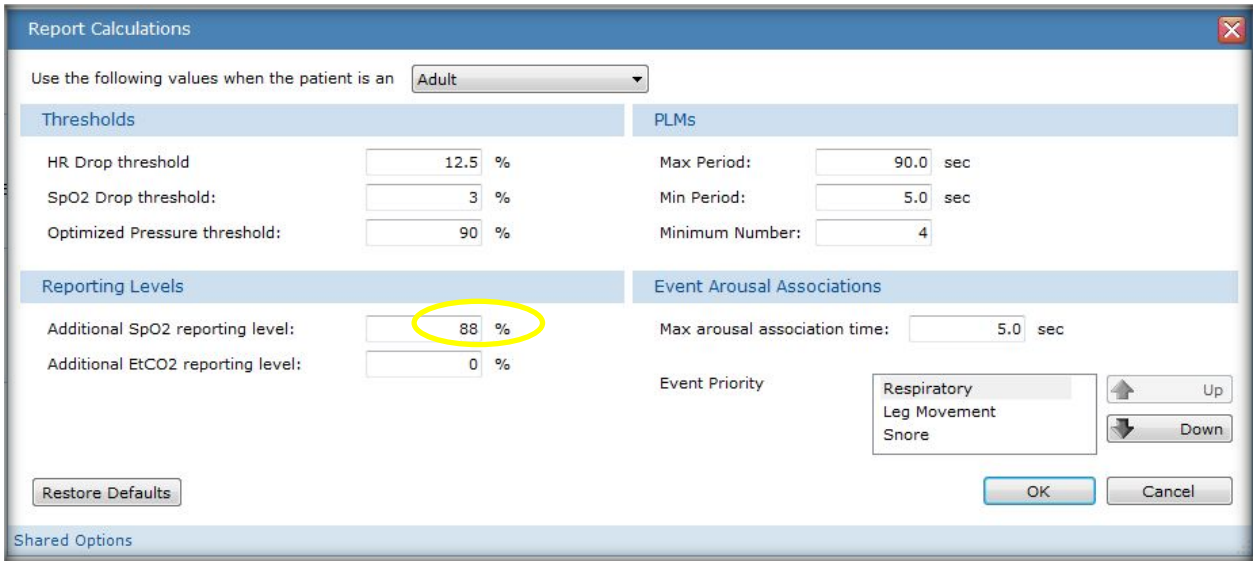


PHILIPS

REPORT CALCULATIONS







Thresholds

HR Drop Threshold - Use this setting to configure the percentage of heart rate drop required to annotate in reports a particular apnea as "with Hr drop." The default value is 12.5%.
SpO2 Drop Threshold - Use this setting to configure the percentage of O2 saturation drop required to annotate a particular apnea as "with O2 sat. drop." An apnea must be followed by a desaturation of x% (where "x" is the value set in this parameter) in order for that apnea to be reported as being associated with an oxygen desaturation. The default value is 3% for infant and adult studies.
Optimized Pressure Threshold - This is a user-defined percentage of the study time for which a percentile pressure is calculated and included in several of the pneumological and neurological reports. The percentile pressure is the pressure that the therapy device is at or below for the user-defined percentage of the study. For example, if you enter 95%, then the report may show a pressure of 13 cmH2O. This means that for 95% of the study, the therapy device supplied 13 cmH2O or less.

Reporting Levels

Additional Spo2 Reporting Level - Sleepware adds the configured saturation level (SpO2%) to the Oximetry Summary section of reports. In this section, a table lists, for each sleep stage, the time in minutes that the oximetry was below that saturation level. The report also adds a line below the table that lists the longest continuous time that the oximetry remained below the level configured by this parameter.

Additional EtCO2 Reporting Level - Sleepware adds the configured EtCO2 threshold (EtCO2%) to the EtCO2 Summary section of the Neuro and Pneumo reports. In this section, a table lists, for each sleep stage, the time in minutes that EtCO2 was above that level.

PLMs

Max Period - Use this setting to configure the maximum number of seconds that can occur between two detected limb movements (see "Leg Movement Parameters") in order to consider them part of the same PLM episode. The default value is 90 seconds for adults and infants. If two detected limb movements are separated by more than 90 seconds, they are considered too far apart to be part of a single PLM episode.
Note: PLM episodes are marked only on reports.
Min Period - Use this setting to configure the minimum number of seconds that can occur between two detected limb movements to consider them separate leg movements within the same PLM episode. The default value is five seconds for adults and infants. Thus, if two limb movements are less than five seconds apart (measured from the start of one leg movement to the start of the next leg movement), they are not considered as part of the same PLM episode.
Minimum Number - Use this setting to configure the minimum number of limb movements that must occur for Sleepware to display a PLM episode. The default value is four for adults and infants. Thus, if four or more limb movements are detected, as determined by the Leg Movement Parameters, and they are chronologically arranged in accordance with the Minimum Period and Maximum Period parameters above, then Sleepware considers them part of a PLM episode.
Note: A PLM episode may include many leg movements once the minimum number has been met, as long as each following movements meets the maximum and minimum period parameters.

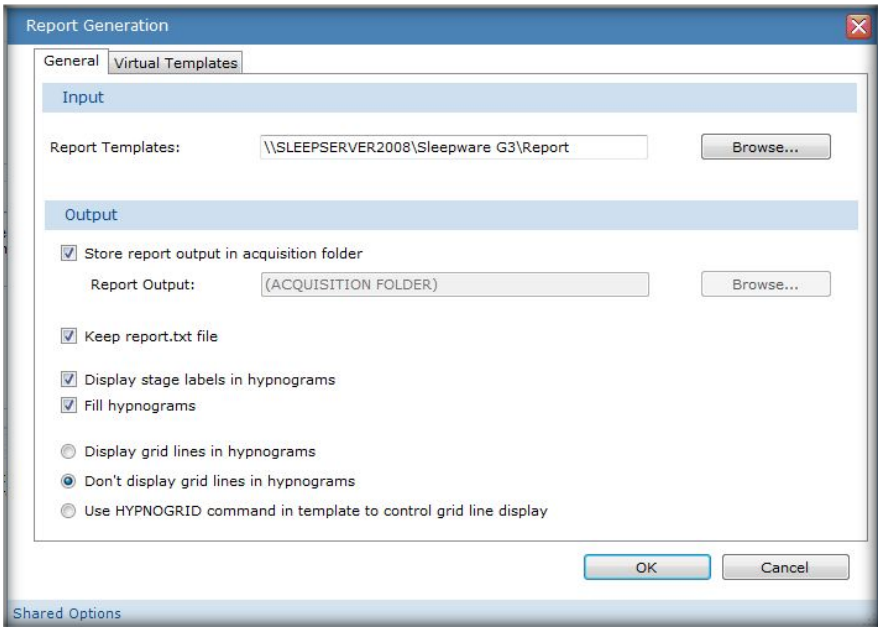
Event Arousal Associations

Max Arousal Association Time - This setting is used to calculate event-arousal associations. It specifies the maximum duration between the end of an event and the start of an arousal. An arousal will only be associated with an event if the arousal begins during the event, or if the time between the end of the event and the start of the arousal, is less than the setting for arousal association. The default value is five seconds.
For example, if you specify a setting of 5.0 seconds, then an arousal event has to begin during an event or less than 5.0 seconds after the end of an event in order for the event to be associated with that arousal. If the duration between the end of the nearest event and the start of an arousal is greater or equal to 5.0 seconds, the arousal is classified as a spontaneous arousal.
Note that more than one arousal may fulfill the criteria for being associated with a particular event. In that case, Sleepware will associate all such arousals with that event. For example, assuming a setting of 5.0 seconds, one arousal may occur during the event and a second arousal may occur four seconds after the end of the event. Both arousals will be associated with that event.
Event Priority - This setting is used to calculate event-arousal associations. It defines the priority ordering in which events are associated with arousals in cases where an arousal follows multiple events. An ordering can be defined for respiratory, leg movement and snore events. For example, if an arousal starts within the maximum duration (see max arousal association time) of both an obstructive apnea and a snore event, and the event priority is respiratory, leg movement and snore, the arousal is associated with the obstructive apnea since respiratory events have a higher priority than snore events. If instead the ordering was snore, respiratory and leg movement, the arousal will be associated with the snore event. The default ordering is respiratory, leg movement, and snore.

PHILIPS

REPORT GENERATION

The Report Generation window allows you to configure the folders for storing reports and templates.
The **General** tab contains options related to the folder for general reports and several visual options regarding the appearance of hypnograms.



Select the **Store report output in acquisition folder** option to store reports in the same folder as the acquisitions. Do not select this option if you want to store reports in a different folder, such as the folder specified in the Report Output box. This folder specifies the base folder where all report output will be stored (if not with the acquisitions). This folder also contains subfolders where the output for the following reports are stored: PSG, MSLT, Inter-Scorer, Export, and HL7. Click the **Browse** button and select, or make, a different folder.

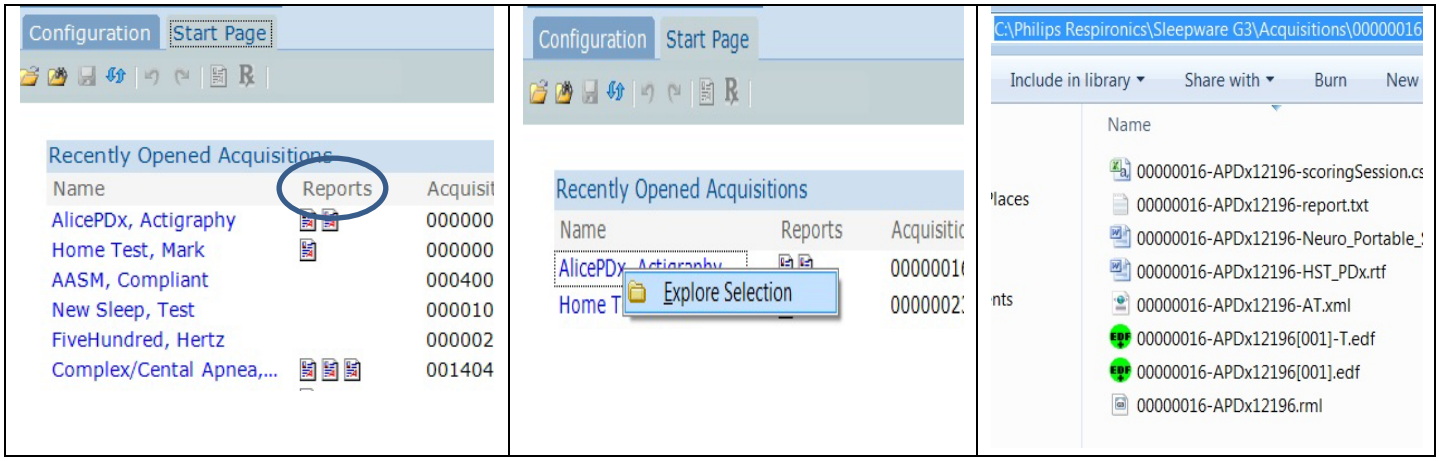
Select the **Keep report.txt file** option to store a text file containing all of the generated report codes and values.

Select the **Display stage Labels in hypnogram** option to include the stage labels in the report.

Select the **Fill hypnograms** option to show the hypnograms as solid blocks in the report.

Choose to either **Display grid lines in hypnograms** or **Don't display grid lines in hypnograms** or **Use HYPNOGRID command in template to control grid line display**.

Reports will be saved on the start page and stored in the acquisition folder along with the study data for easy access. If there is a report icon in the reports column, this will indicate a report has been generated for this acquisition. You can simply click on the icon to open the report. You can also choose to right click on the patient name to reveal 'explore selection'. Left click on the explore selection folder to be directed to the acquisition folder for this patient. Here you can view the report by double-clicking to open it. You can delete reports from this area as well.

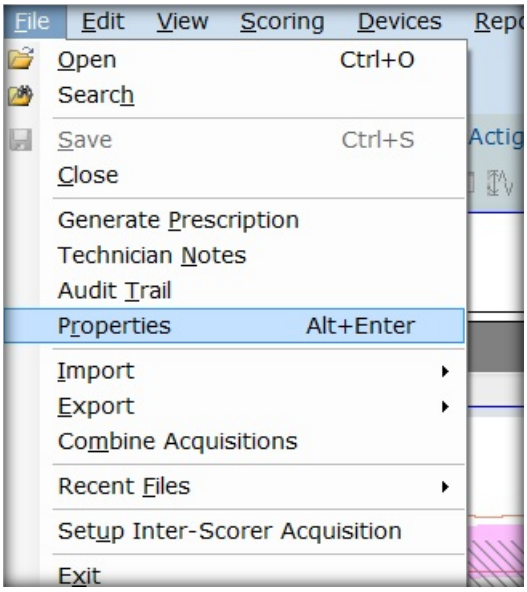

Configuration
Start Page
Recently Opened Acquisitions
Name
Reports
Acquisit
AlicePDx, Actigraphy
000000
Home Test, Mark
000000
AASM, Compliant
000400
New Sleep, Test
000010
FiveHundred, Hertz
000002
Complex/Cental Apnea,...
001404
Configuration
Start Page
Recently Opened Acquisitions
Name
Reports
Acquisitic
Explore Selection
C:\Philips Respironics\Sleepware G3\Acquisitions\00000016
Include in library
Share with
Burn
New
Name
00000016-APDx12196-scoringSession.cs
00000016-APDx12196-report.txt
00000016-APDx12196-Neuro_Portable_
00000016-APDx12196-HST_PDx.rtf
00000016-APDx12196-AT.xml
00000016-APDx12196[001]-T.edf
00000016-APDx12196[001].edf
00000016-APDx12196.rml

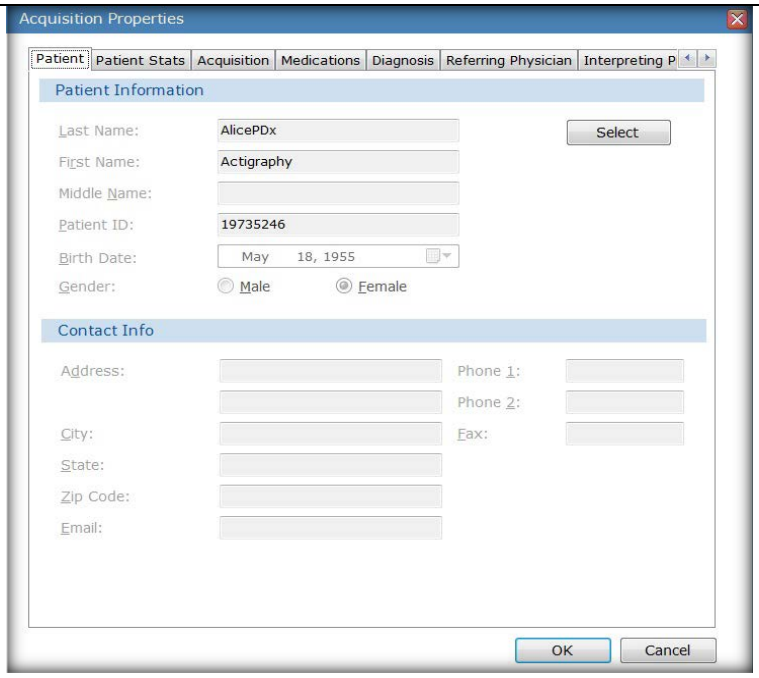
PHILIPS

CUSTOM ACQUISITION PROPERTIES

The Custom Acquisition Properties window allows you to add extra data items that are kept with acquisitions and appear in the File Properties window. These fields can be used in order to add more patient information or information regarding the patient to the patient record. The information entered here can be used to generate the report. The default category tabs included with an acquisition are **Patient**, **Patient Stats**, **Acquisition**, **Referring Physician**, and **Interpreting Physician**.

With the study open, select File-Properties to view Acquisition Properties.





Follow these steps to add a new category and a label within the category:

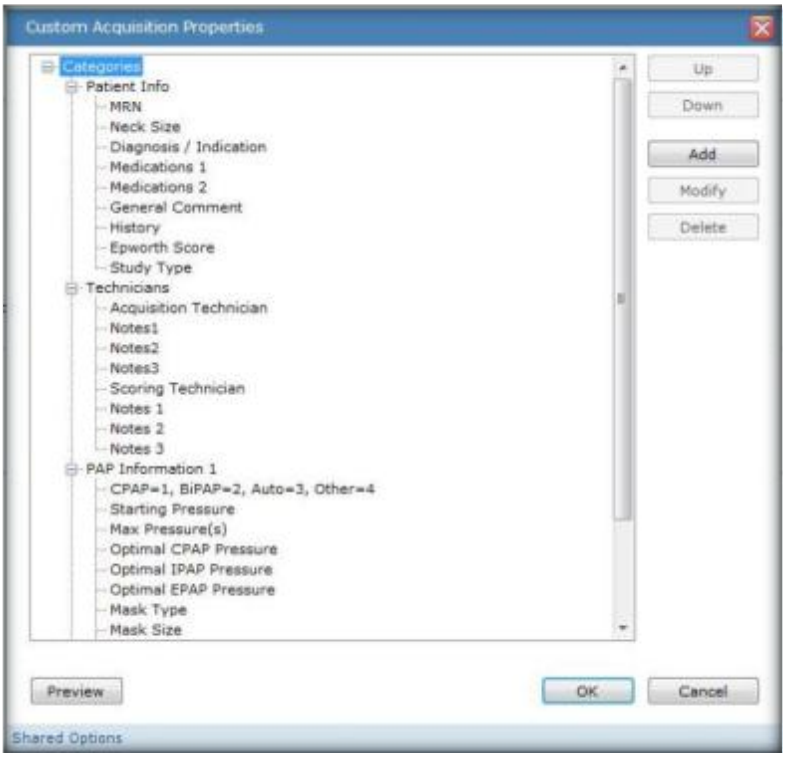
1. Click on the word **Category** at the top of the tree structure.
2. Click the **Add** button.

   The Custom Acquisition Properties window is displayed.
3. Enter a name in the **Category** box and click **OK**.

   The window closes and a new category is added to the tree structure.
4. Click on the new category name, then click **Add**.

   The Custom Acquisition Properties window is displayed.
5. Enter a name in the **Label Name** box and click **OK**.

   The window closes and a new label is added under the new category name.



PHILIPS

SLEEP STAGING

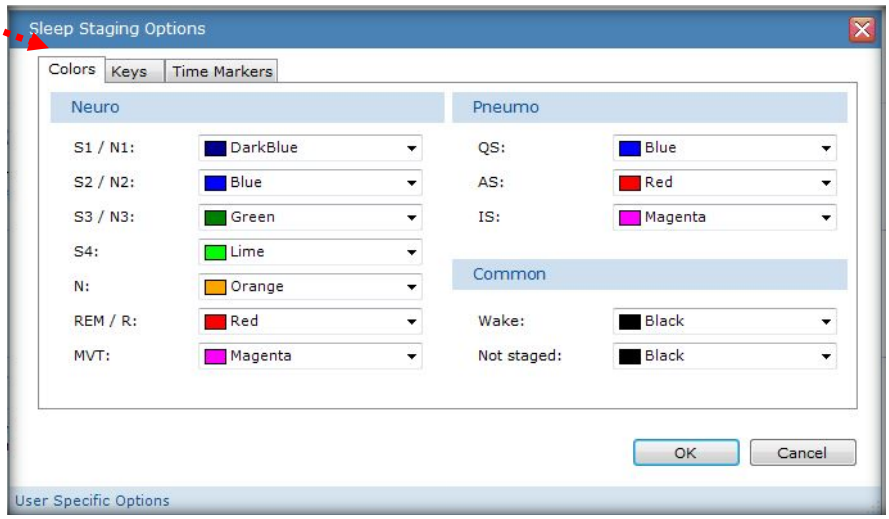
Sleep Staging

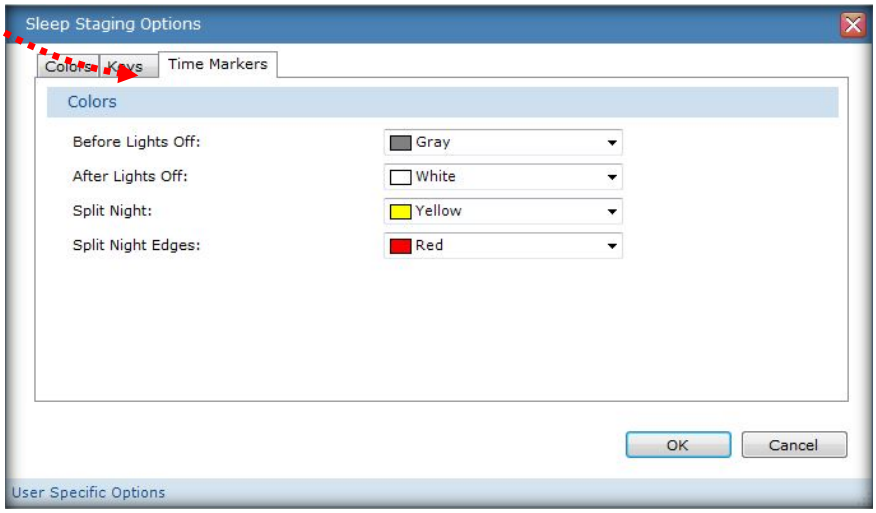
The Sleep Staging Options window allows you to set the sleep stage colors, hot keys, and time marker colors.

To set the sleep staging options:

1. Click the **Configuration** tab.
2. Double-click the **Sleep Staging** link.

   The Sleep Staging Options window opens.
3. (Optional) Click the **Colors** tab and select a color for each sleep stage shown.
4. (Optional) Click the **Keys** tab and select a keyboard key for each sleep stage shown.
5. (Optional) Click the **Time Markers** tab and select a color for each time marker shown.
6. Click **OK** to save changes.





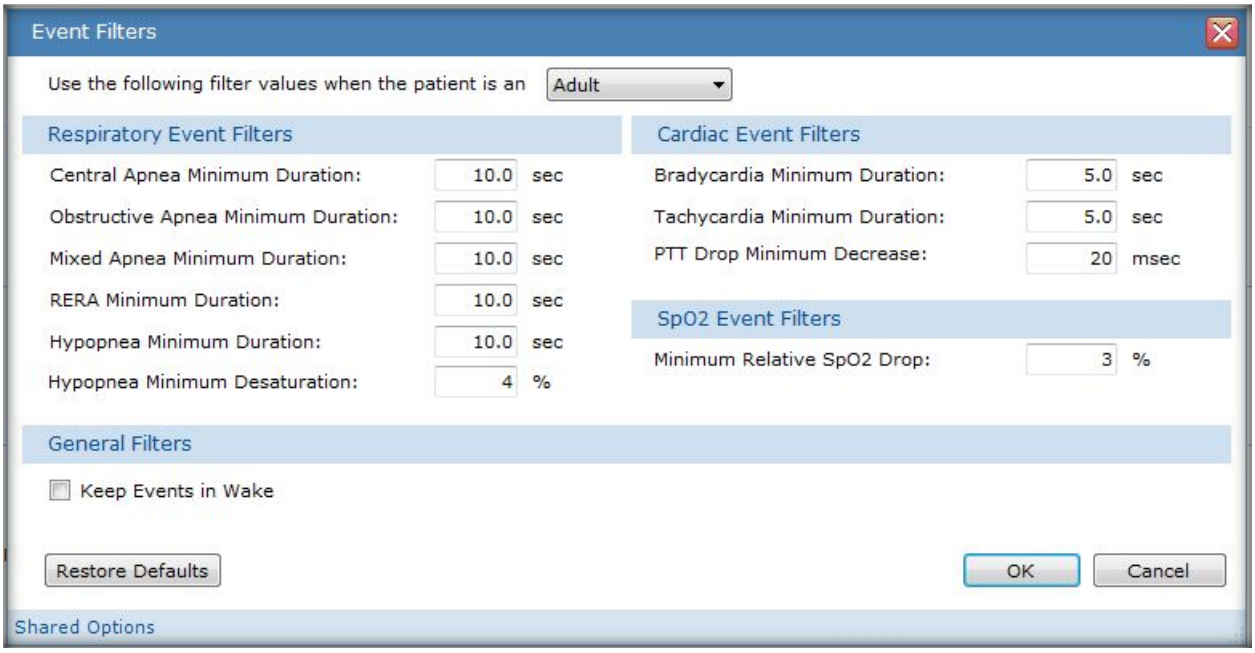
PHILIPS

EVENT FILTERS

Event Filters

The Event Filters window allows you to set various respiratory, cardiac and SpO2 event filters. The values of the filters can vary between studies for adults or infants.

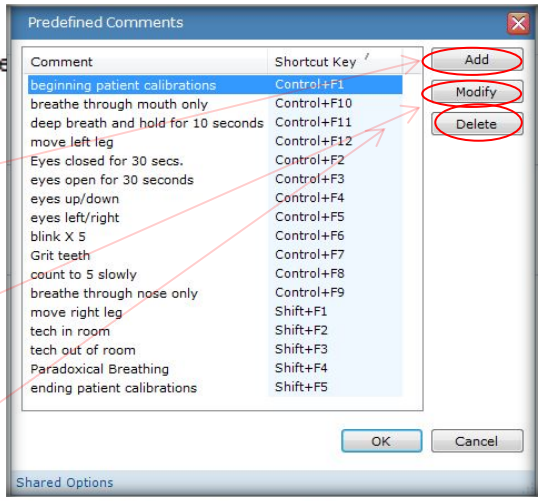
Event filters provide a way to filter out certain events from the displays and reports. When you select an event filter and an event meets those criteria, it is shown in a "ghosted" format on the raw data panel. It is removed from the event panel and trend panel displays. Additionally, reports will not count that particular event.



PHILIPS

PREDEFINED COMMENTS

Predefined Comments



The Predefined Comments window allows you to add, edit, and delete comments and shortcut keys used at the application level.

To access the predefined comments:

1. Click the **Configuration** tab.
2. Double-click the **Predefined Comments** link.

   The Predefined Comments window opens.

To add a new comment and shortcut key:

1. Click the **Add** button.

   The Predefined Comment window opens.
2. Enter text into the **Comment** box (maximum 255 characters).
3. Select a **Shortcut key** from the list and click **OK** to save your changes and close the window.

To edit an existing predefined comment and shortcut key:

1. Select a comment in the list and click the **Modify** button.

   The Predefined Comment window opens.
2. Edit the text shown in the **Comment** box.
3. Select a new **Shortcut key** if necessary from the list and click **OK** to save your changes and close the window.

To delete a predefined comment and shortcut key:

1. Select a comment in the list and click the **Delete** button.

   A confirmation prompt is displayed.
2. Click **Yes**, then click **OK**.

PHILIPS

ANALYSIS PARAMETERS

Analysis Parameters

Use the Analysis Parameters option in the Configuration tab to select and configure the detection types to include in auto-analysis (auto-scoring) of events.

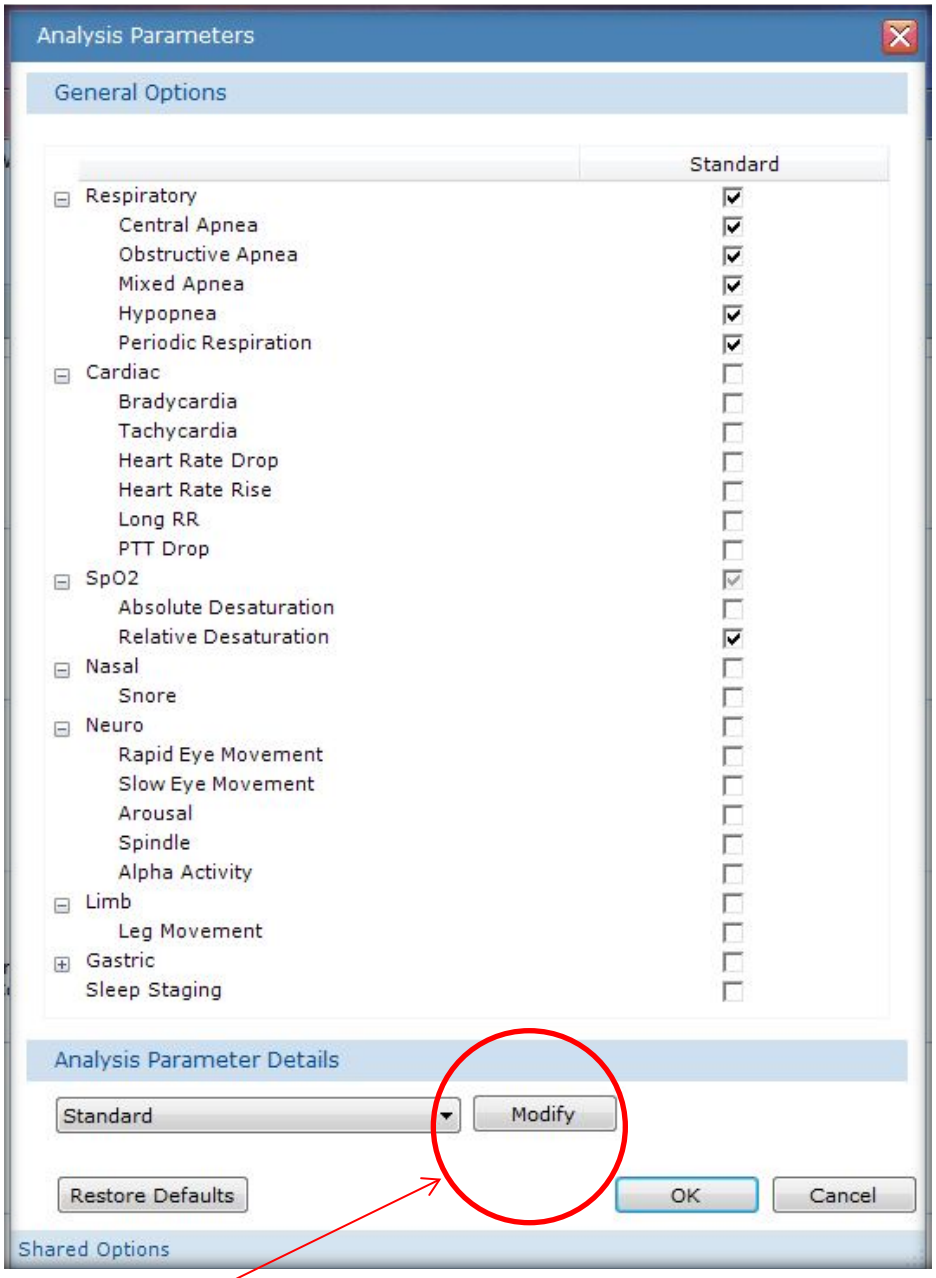
Note: These parameters are used for online Alice base station acquisitions and when an Alice PDx is imported. A copy of the parameters is stored with the acquisition. Once the parameters are stored, the Analysis Parameters defined in the Configuration tab are no longer used by the acquisition. To change acquisition-specific parameters, use the Scoring menu on the Main Menu bar while displaying an acquisition.

To select detection types:

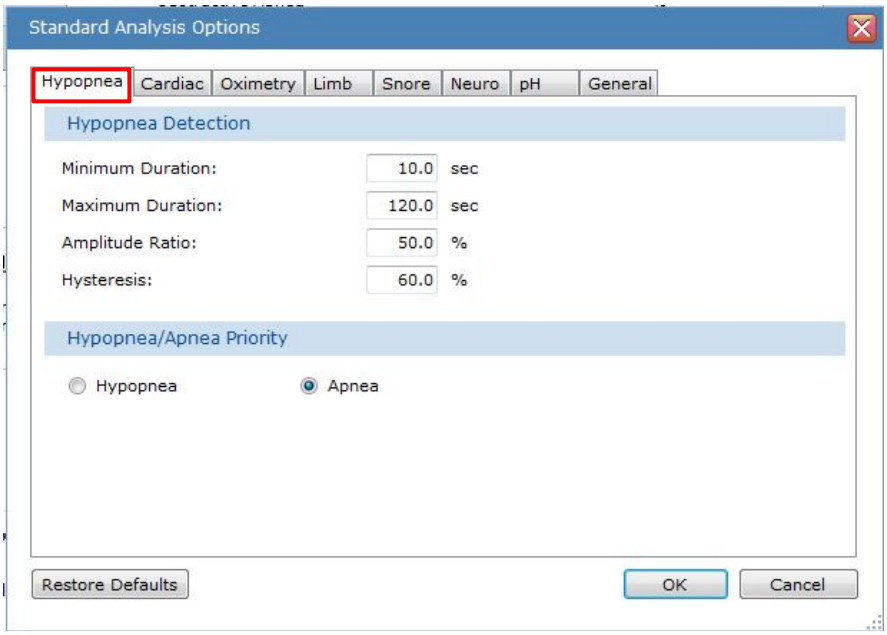
1. Click the **Configuration** tab.
2. Double-click the **Analysis Parameters** link.

   The Analysis Parameters window opens.
3. Click the check box associated with an applicable detection type.
4. Clicking the + expands the type category to show the individual event types under it.
5. (Optional) Select the source for the automatic analysis algorithms from the list. Currently, only Standard is supported and is the default selection.
6. (Optional) Click the **Modify** button.

   The Standard Analysis Options window opens. Refer to the following Standard Analysis Options section below for details.
7. (Optional) Click the **Restore Defaults** button to re-establish the default settings for the General Options.
8. Click **OK** to save your changes and close the window.



Select Modify Standard Analysis Parameters to make adjustments in settings and sensitivity of the events you have selected for auto-analysis:



The **Hypopnea** tab

Use this tab to configure the auto analysis parameters for hypopnea detection:

a. Set the **Minimum Duration** value (seconds). The range is 0.0 - 600.0; default value is 10.0.

b. Set the **Maximum Duration** value (seconds). The range is 0.0 - 600.0; default value is 60.0.

c. Set the **Amplitude Ratio** value (percentage).

   This is a threshold used to determine if a hypopnea is auto-scored. Sleepware builds a "model breath" of the breathing under analysis. If the amplitude of the breath currently being analyzed is equal to the hypopnea amplitude factor multiplied by the amplitude of the model breath, then a hypopnea event is begun. The range is 0.0 - 100.0; default value is 50.0%.

d. Set the **Hysteresis** value (percentage).

   Sleepware ends the hypopnea when the amplitude of the current breath reaches the amplitude of the model breath times the hysteresis factor. The range is 0.0 - 100.0; default value is 60.0%.

e. Select **Hypopnea** or **Apnea**.

   If an apnea and an hypopnea are auto-scored at that same time period, this setting determines which event takes priority. The default value is Hypopnea.

The **Cardiac** tab

Use this tab to configure the auto analysis parameters for cardiac event detection:

a. Set the **Adult HR Below** value (beats per minute). The range is 0 - 255; default value is 60.

b. Set the **Infant HR Below** value (beats per minute). The range is 0 - 255; default value is 100.

   These are thresholds for the heart rate to fall below the baseline to auto-score a bradycardia.

c. Set the **Adult HR Above** value (beats per minute). The range is 0 - 255; default value is 100.

d. Set the **Infant HR Above** value (beats per minute). The range is 0 - 255; default value is 150.

   These are thresholds for the heart rate to rise above the baseline to auto-score a tachycardia.

e. Set the **HR Drop Threshold** value (percentage). The range is 0.2 - 100; default value is 22.2%.

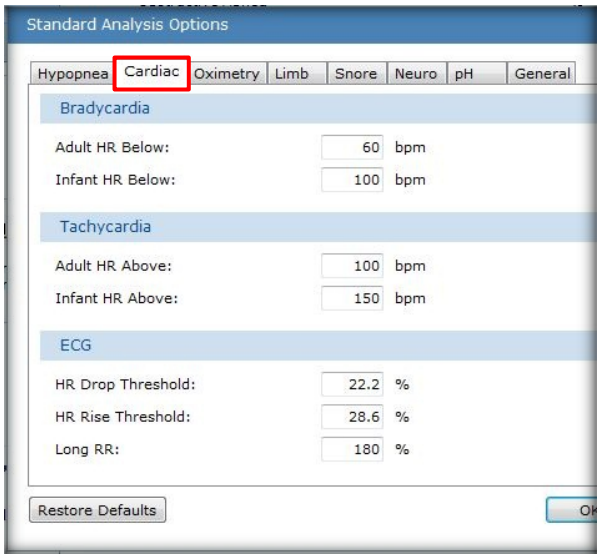
   This is a drop percentage threshold used in determining a (relative) low heart rate event.

f. Set the **HR Rise Threshold** value (percentage). The range is 0.2 - 200; default value is 28.6%.

   This is a rise percentage threshold used in determining a (relative) high heart rate event.

g. Set the **Long RR** value (percentage). The range is 0 - 500; default value is 180.0%.

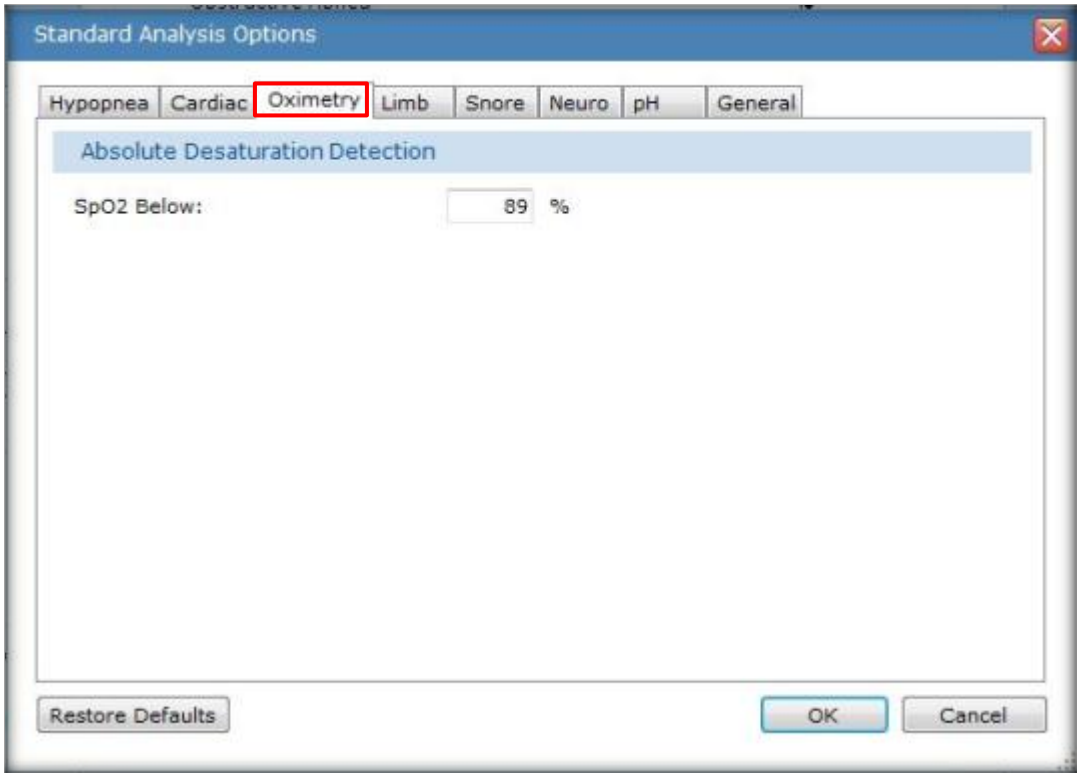
   The long RR algorithm compares the time between R-waves x and y, and the time between R-waves y and z. If the second interval is a certain percentage greater than the first interval, then Sleepware scores the second R-wave-to-R-wave (R-R) interval as a long RR event.



The **Oximetry** tab

Use this tab to configure the auto analysis parameter for absolute desaturation detection:

a. Set the **SpO2 Below** value (percentage). The range is 0 - 100; default value is 80.
   The threshold rate to fall below the baseline in order to auto-score an absolute desaturation.



The **Limb** tab

Use this tab to configure the auto analysis parameters for leg movement detection:

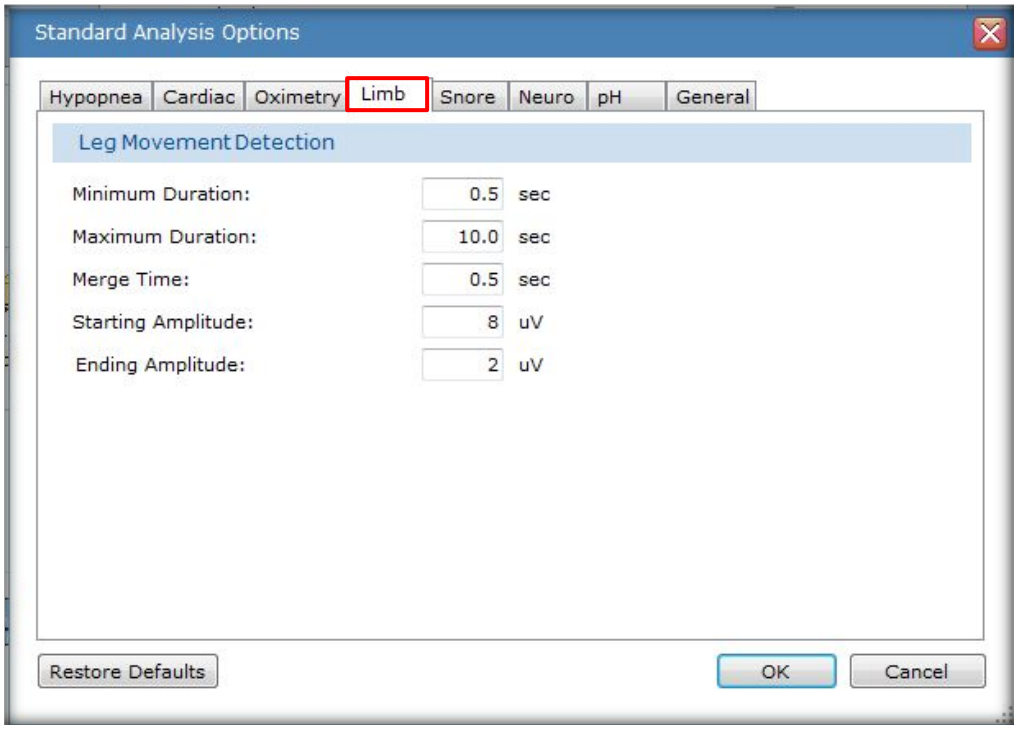
a. Set the **Minimum Duration** value (seconds). The range is 0.0 - 600.0; default value is 0.5.
   The minimum duration to detect a leg movement.

b. Set the **Maximum Duration** value (seconds). The range is 0.0 - 600.0; default value is 10.
   The maximum duration to detect a leg movement.

c. Set the **Merge Time** value (seconds). The range is 0.0 - 60.0; default value is 0.5.
   Sleepware merges detected leg movement events on the same leg channel that overlap or are within the merge time.

d. Set the **Starting Amplitude** value (microvolts). The range is 2 - 100; default value is 8.
   A leg movement event starts when the amplitude rises above the baseline by the amount specified by the Starting Amplitude parameter.

e. Set the **Ending Amplitude** value (microvolts). The range is 2 - 100; default value is 2.
   A leg movement event ends when the amplitude falls to the value specified by the Ending Amplitude parameter.



PHILIPS

The **Snore** tab

Use this tab to configure the auto analysis parameters for snore detection:

a. Set the **Blind Period** value (seconds). The range is 0.0 - 60.0; default value is 2.0.

   The blind period is defined as the amount of time, in seconds, that Sleepware overlooks data, or is "blind," past the detection of an individual snore.

b. Set the **Max. Period** value (seconds). The range is 0.0 - 60.0; default value is 6.0.

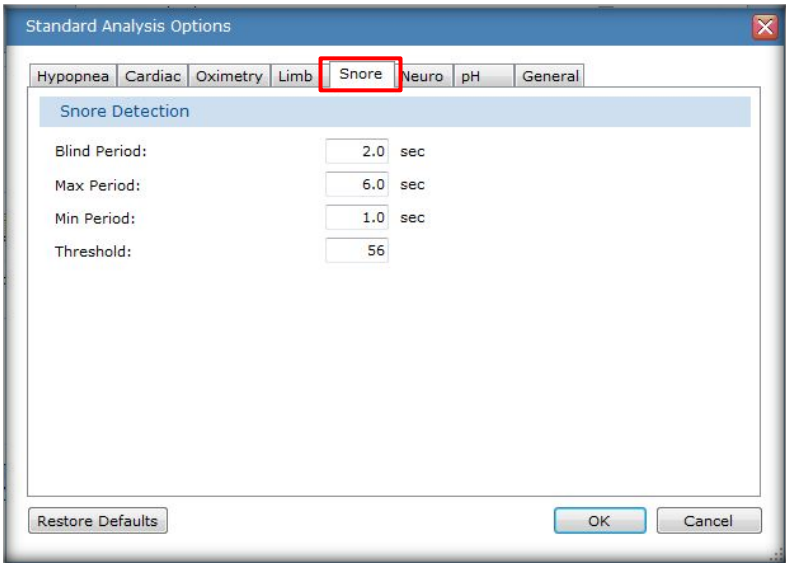
   The maximum number of seconds that can occur between two detected snores in order to consider them part of a snoring episode.

c. Set the **Min. Period** value (seconds). The range is 0.0 - 60.0; default value is 3.0.

   The minimum number of seconds that can occur between two detected sounds to consider them separate snoring sounds.

d. Set the **Threshold** value. The range is 0 - 250; default value is 56.

   This is the minimum amplitude required to detect a snore on the snore channel. The value is a computer-based number representing amplitude. The higher the number, the higher the amplitude required to detect a snore, resulting in less snores being detected. The lower the number, the lower the amplitude required, resulting in more snores being detected.



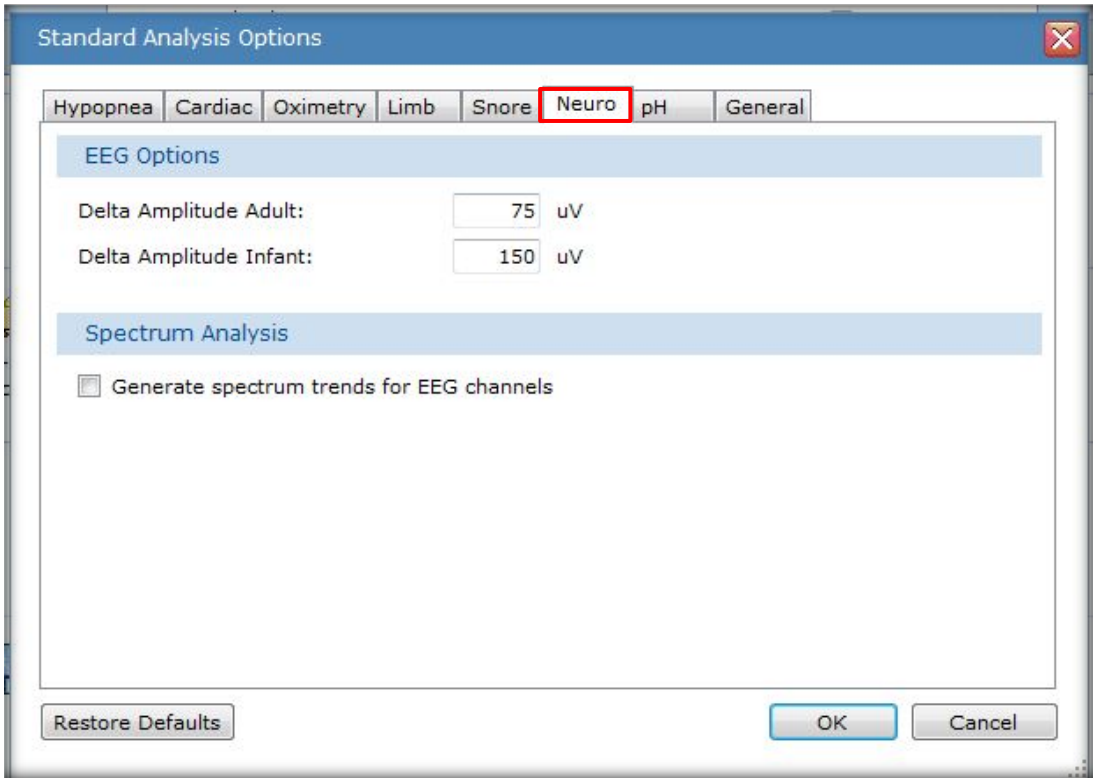
The **Neuro** tab

Use this tab to configure the auto analysis parameters for Neuro event detection:

a. Set the **Delta Amplitude Adult** value (microvolts). The range is 0 - 300; default value is 75. The minimum amplitude to detect a delta wave for an adult acquisition.

b. Set the **Delta Amplitude Infant** value (microvolts). The range is 0 - 300; default value is 150. The minimum amplitude to detect a delta wave for an infant acquisition.

☑ Place a check in the box if you'd like to generate spectrum trends for EEG channel.



PHILIPS

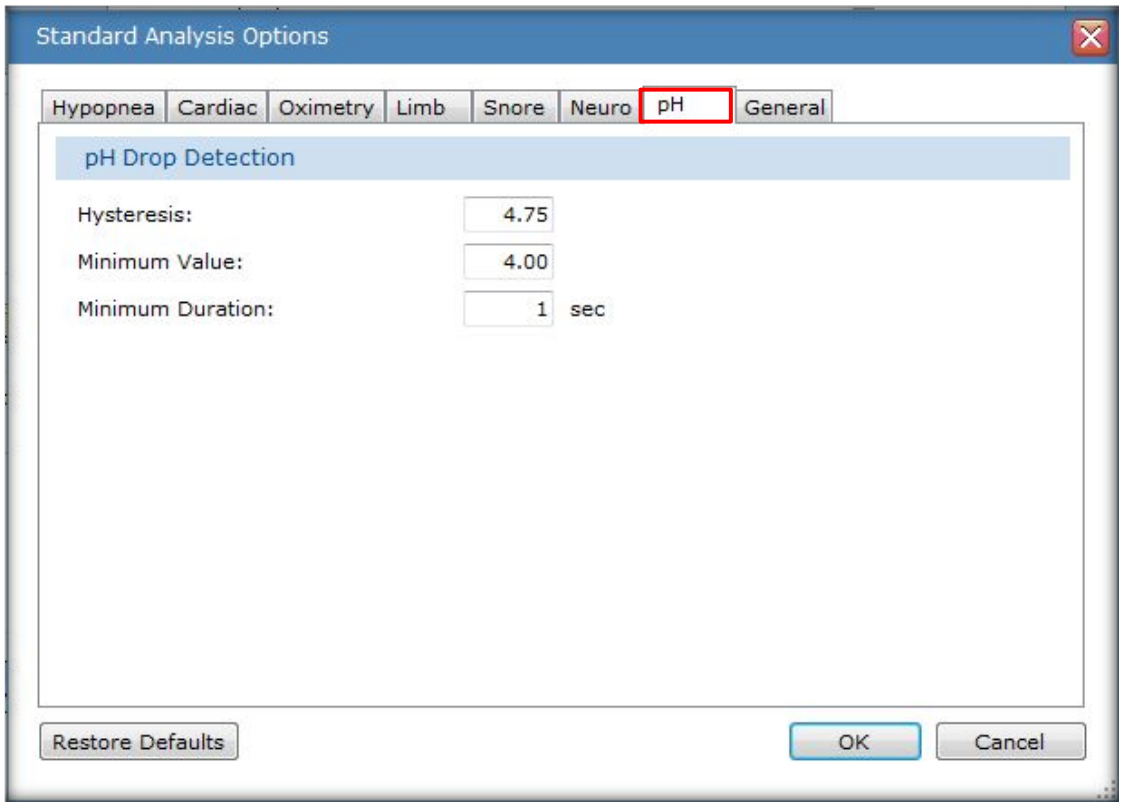
The **pH** tab

Use this tab to configure the auto analysis parameters for pH detection:

a. Set the **Hysteresis** value. The range is 0.0 - 14.0; default value is 4.75.
   Determines the end of a pH drop event. The pH must rise above this threshold to end the event.

b. Set the **Minimum Value**. The range is 0.0 - 14.0; default value is 4.0.
   Determines the start of a pH drop event. The pH must fall below this threshold to start the event.

c. Set the **Minimum Duration** value (seconds). The range is 0 - 600; default value is 1.
   Minimum duration for a pH event to be detected.

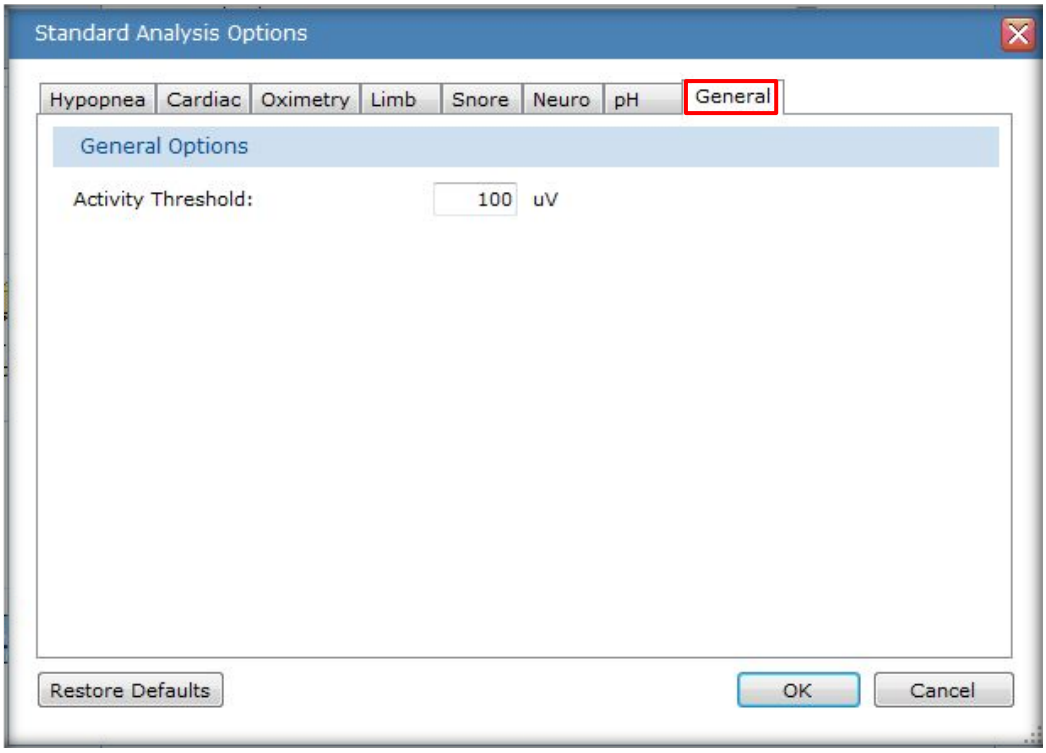


The **General** tab

Use this tab to configure other analysis parameters:

a. Set the **Activity Threshold** value (seconds). The range is 0 - 500uV; default value is 100uV.

   This parameter specifies the activity threshold voltage used by the Standard analysis implementation when computing the actimetry channel for Alice PDx. Voltage on the raw actimetry channel must exceed the threshold voltage for a half second in order for activity to be present.



PHILIPS

CUSTOM EVENTS

Custom Events

The Custom Events Setup window allows you to add, modify, and delete a custom event definition.

To access the Custom Events Setup window:

1. Click the **Configuration** tab.
2. Double-click the **Custom Events** link.

   The Custom Events Setup window opens. The options available under the tabs in this window are explained in the following sections.

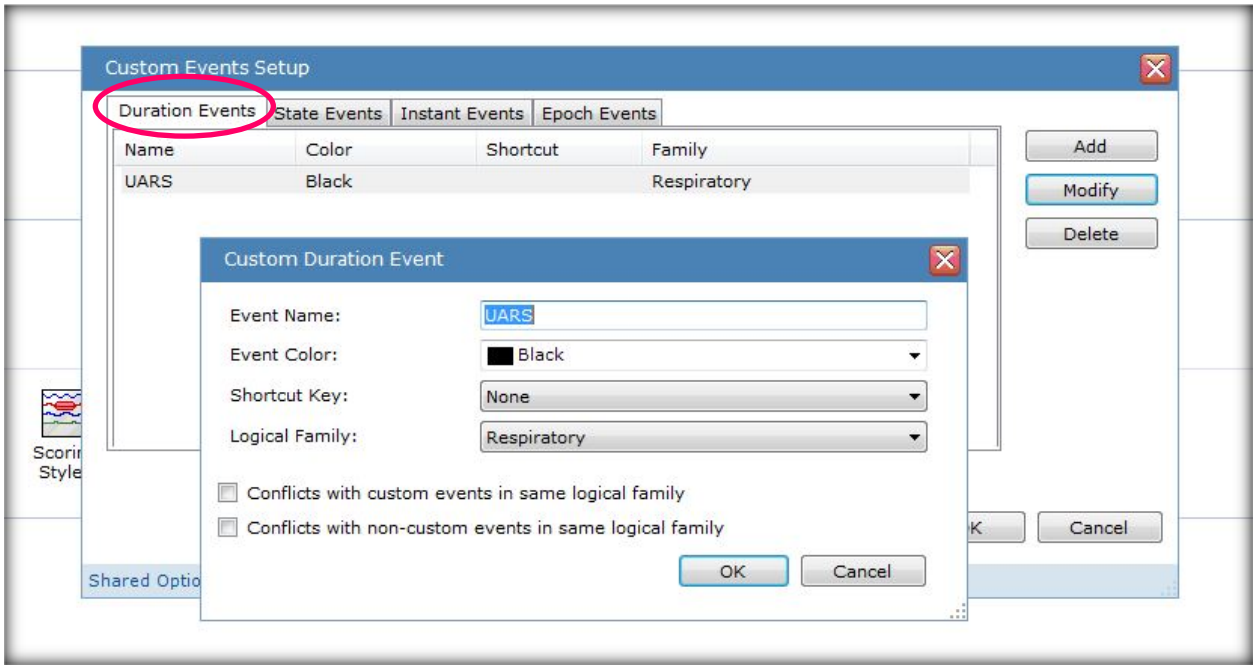
There are four different custom event types:

- **Duration Events** – Duration events allow you to click and drag on the raw data display to create the event.
- **State Events** – State events can be used to mark a change in status in some part of the data. State events can be scored by selecting the event and state on the background context menu of the raw data display. The state events appear in the data markup channel
- **Instant Events** – Instant events can be used to mark an event whose duration is not important. Instant events can be scored by selecting the event from the background context menu of the raw data display. The instant events appear in the data markup channel.
- **Epoch Events** – Epoch events can be used to mark an event that affects an entire epoch. Epoch events can be scored by selecting the event from the background context menu of the raw data display. The epoch events appear in the data markup channel.

When adding/modifying an event, an additional window (specific to the event's type) is displayed with which you can set the event's properties.

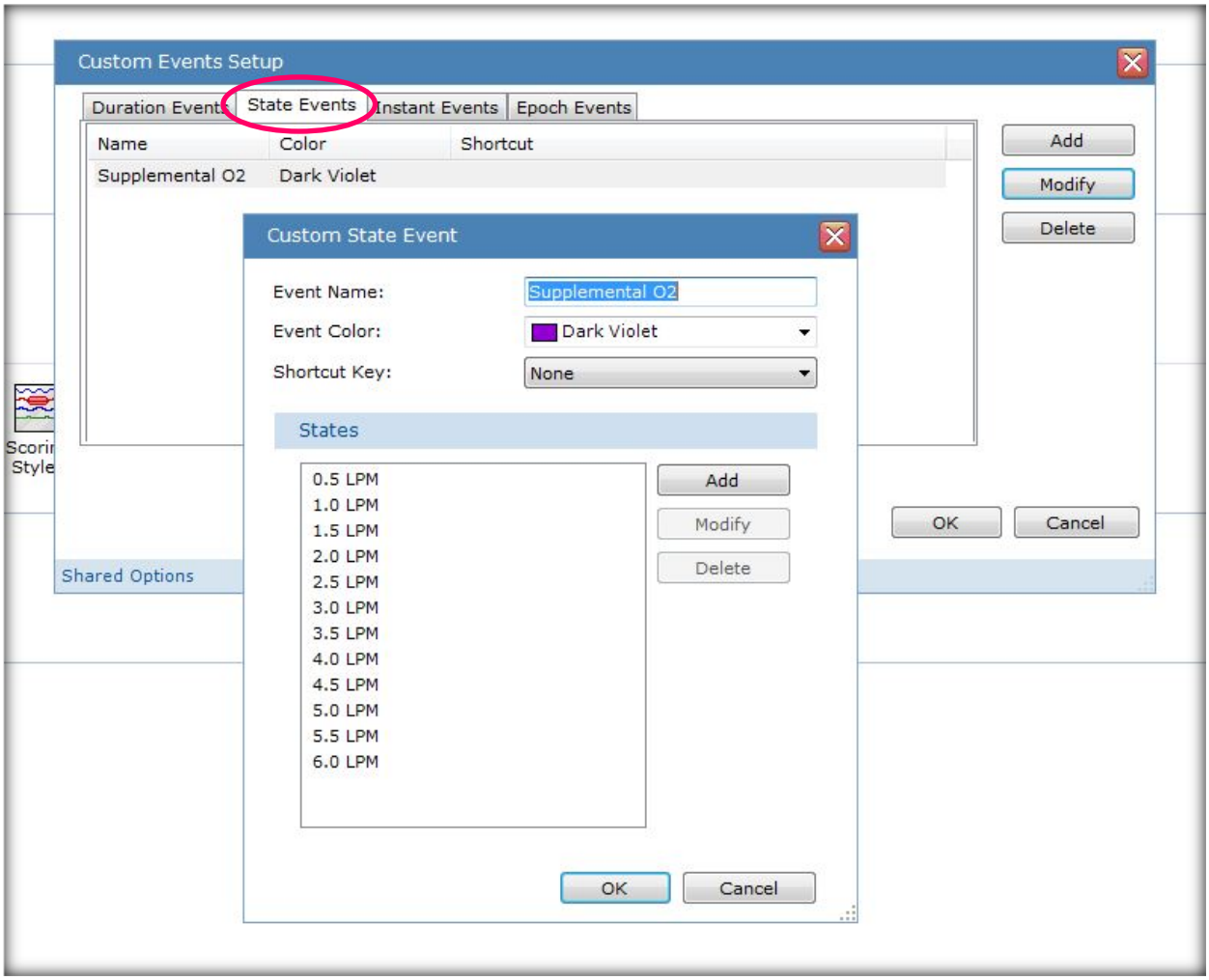
PHILIPS

Sample Custom ***Duration*** Event



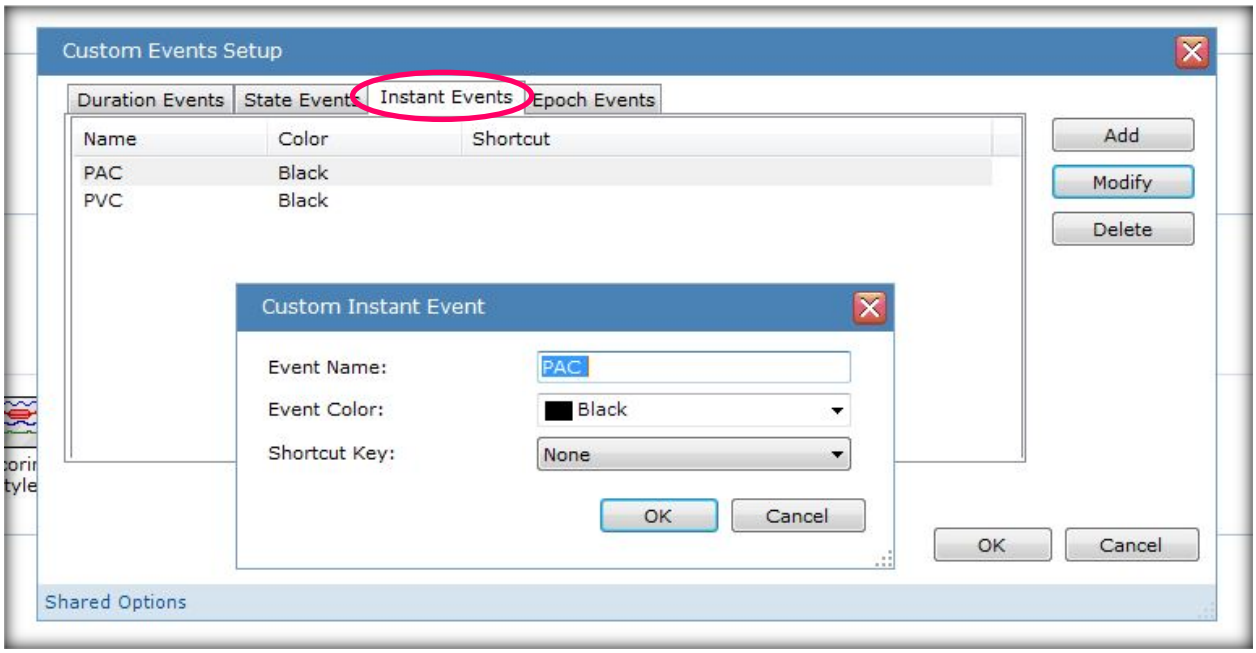
PHILIPS

Sample Custom ***State*** Event

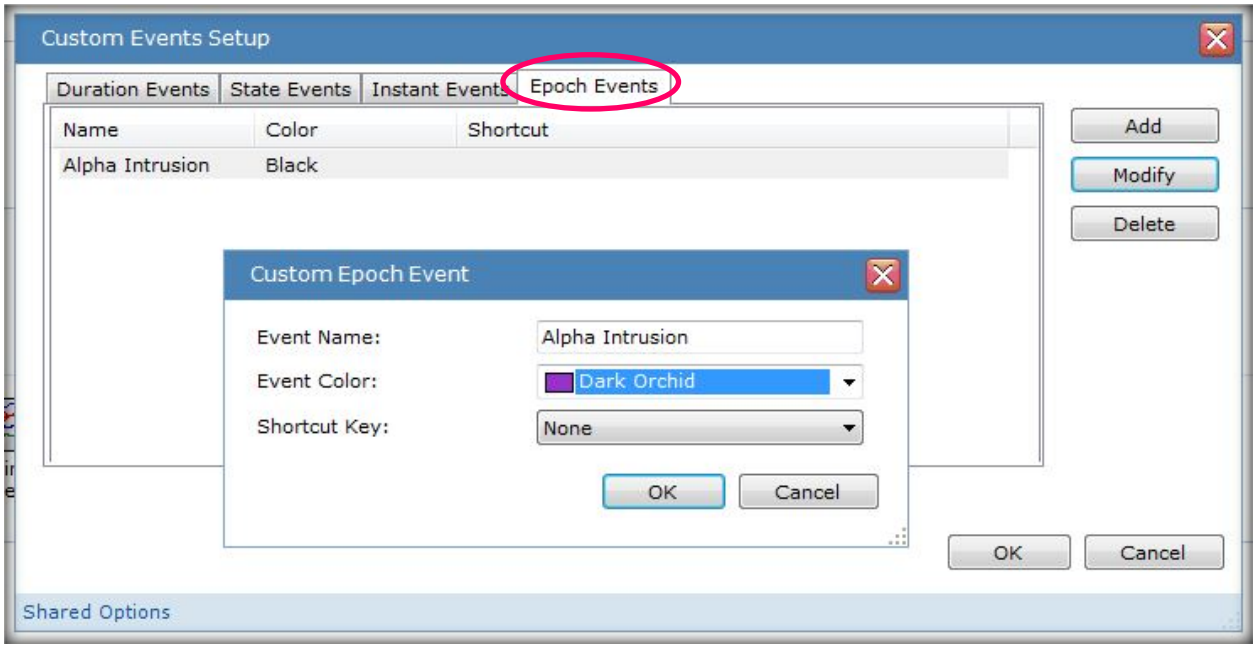


PHILIPS

Sample Custom ***Instant*** Event



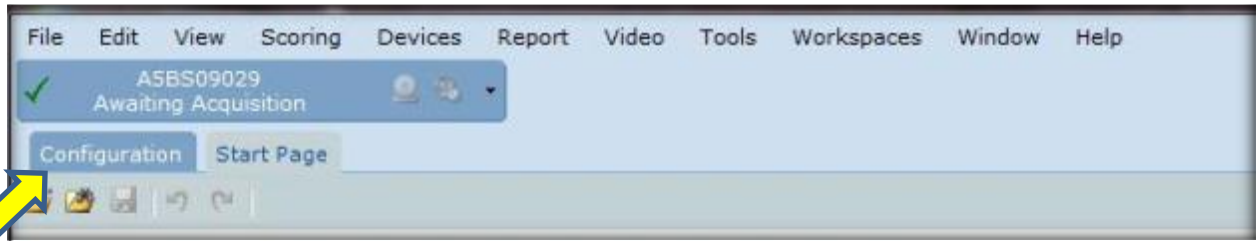
Sample Custom ***Epoch*** Event



PHILIPS

SCORING STYLES

- The **Scoring Styles** feature was designed to allow you to customize the functionality and appearance of scoring events so that manual scoring is optimized for the way you work, thereby increasing your productivity in the least amount of time.

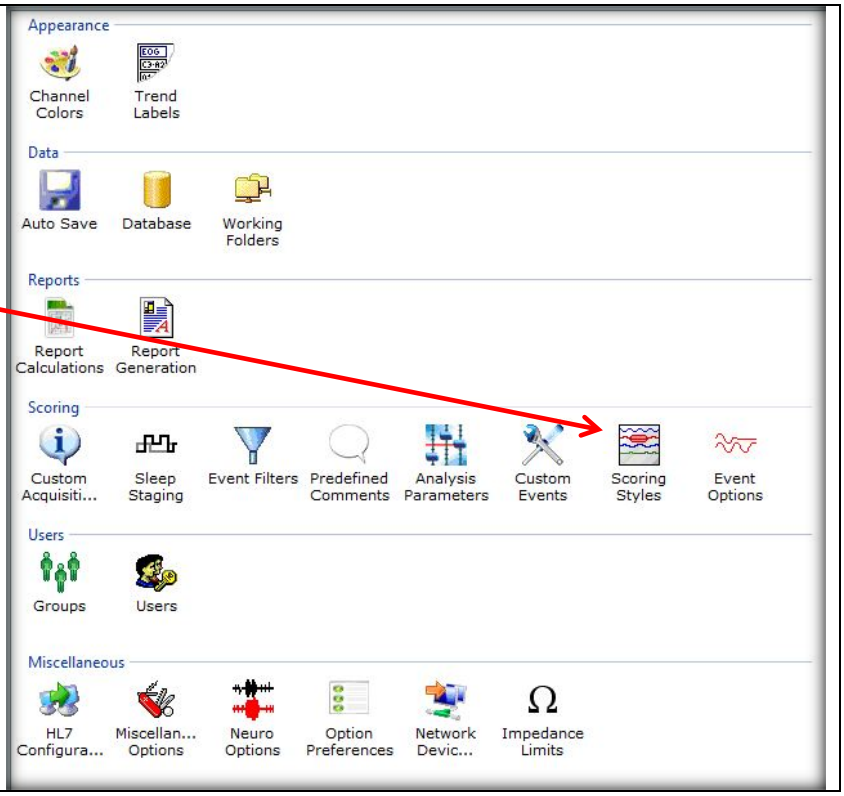


- To access the scoring styles: Click the **Configuration** tab, then…

Double-click on the **Scoring Styles** icon.

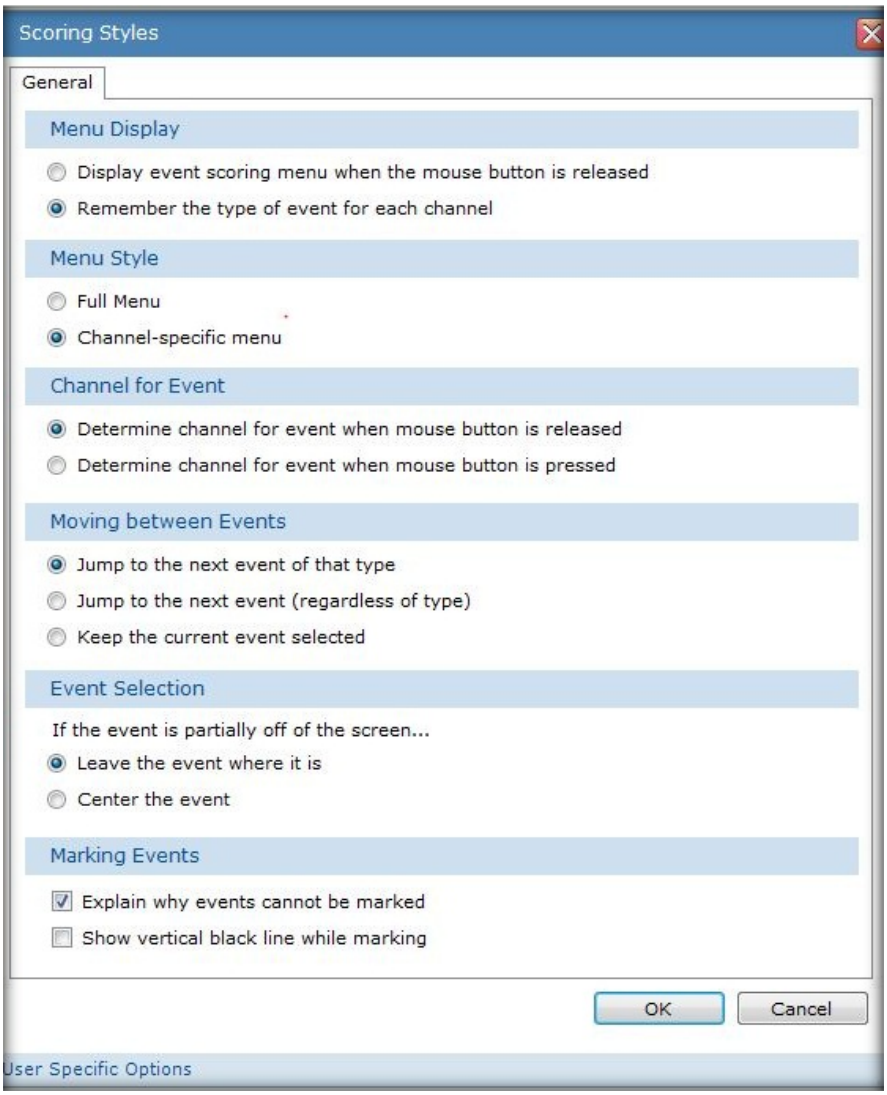
The Scoring Styles window is displayed.

Here you can set your individual scoring style.



PHILIPS

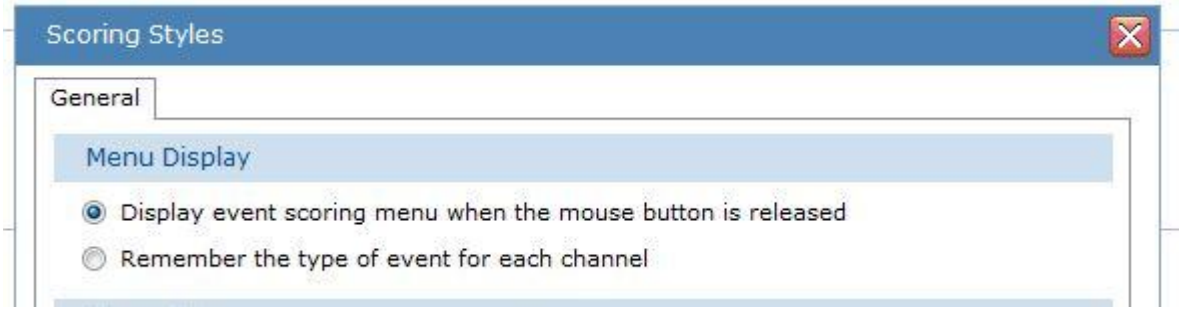
TO SET SCORING STYLES



1. Select a **Menu Display** option.

a) The first option means that each time you click-and-drag the mouse pointer along a channel's waveform and release the mouse button, a pop-up menu of events is displayed. You then click on an event in the list to mark it on the study.

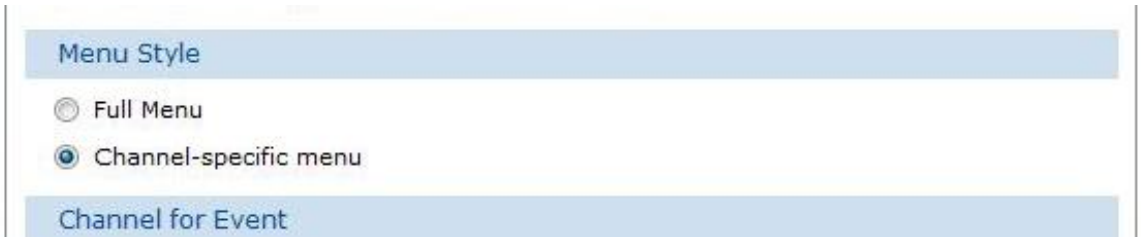
b) The second option is less manual. You only click-and-drag the mouse pointer along a channel's waveform and choose an event from the pop-up menu the first time on a channel. For all subsequent click-and-drag operations on the same channel, Sleepware remembers the event type initially selected and marks that same event type.



2. Select a **Menu Style** option.

a) The first option displays the full menu of event types regardless of the channel you're on when you release the mouse button after dragging.

b) The second option means that the pop-up menu only displays events related to the channel you're on at the time. For example, if you're currently on the ECG channel and the pop-up menu is displayed, it will only offer events relevant to ECG. However, these are also configurable by changing the selections under the **Menu** tab for the ECG channel. Refer to Event Options for details.

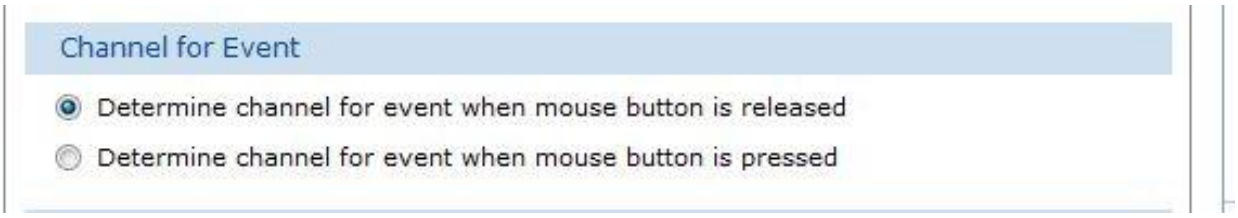


3. Select a **Channel for Event** option.

This option determines how the software decides which channel to use when you drag across it.

a) The first option means that once you left-click and start to drag, the event is not marked until the mouse button is released, regardless of the channels crossed over (up or down). The highlight bar actually moves (up or down) with the mouse pointer.

b) The second option, unlike the 1st option, means that once the left-click is made on a given channel, regardless of where the mouse pointer may move while it is dragged, releasing the mouse button marks the channel that was clicked on.

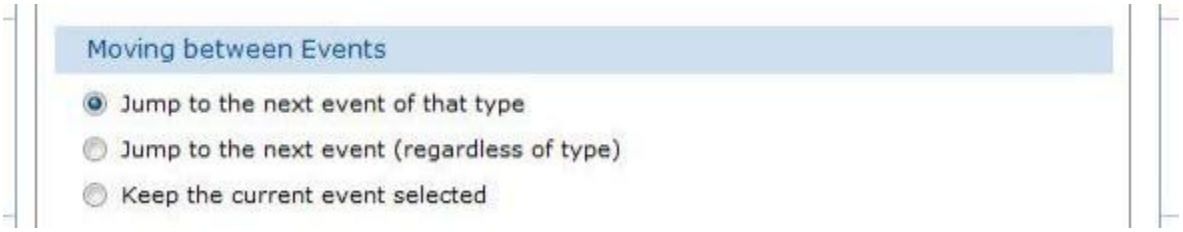


4. Select the **Moving Between Events** option

a) The first option causes Sleepware to automatically move the next event of the same type immediately following the event's validation (pressing the "+" key). Also, this option enables the **Tab** key to move from one event to the next event of the same type. The **Shift+Tab** moves between the same events but in reverse order.

b) The second option causes Sleepware to immediately move to the next chronological event regardless of its type once the current event is validated. Also, this option enables the **Tab** key to move in chronological order from event to event regardless of the event's type. The **Shift+Tab** moves in reverse order.

c) The third option prevents Sleepware from moving away from the initial event validated.



5. Select an **Event Selection** option.

The 1st option causes Sleepware to leave the event where it is on the screen even if it runs partially off the current display area.

The 2nd option causes Sleepware to center an event when it is clicked on even if it is only partially displayed at the time.

6. Select a **Marking Event** option.

The 1st option causes Sleepware to provide an explanation about why events cannot be marked. This is more helpful than seeing disabled events on the pop-up menu.

The 2nd option causes Sleepware to display a temporary vertical black line at the beginning and end of the time period used for marking an event.

7. Click **OK** to save changes and close the Scoring Styles window.

PHILIPS

EVENT OPTIONS

The Event Options are shared options and can be changed by those that have permission to do so. These changes affect all users on all computers.

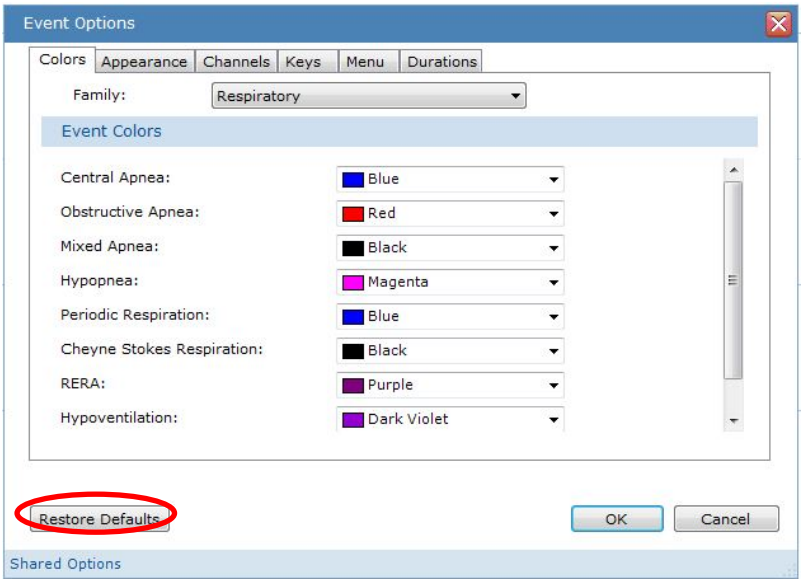
The event option window allows you to set the colors appearance of individual events within family event groups. You can also set attributes for event channels, keyboard shortcut keys for events, and the channel-specific menu structure for channel types and the duration for single-click scoring events.

The **Colors** Tab

Use this tab to assign colors to events.

Follow these steps to assign colors:

1. Select a family of events from the **Family** drop-down list. All events associated with that family are displayed.
2. Select a color for each from the lists.

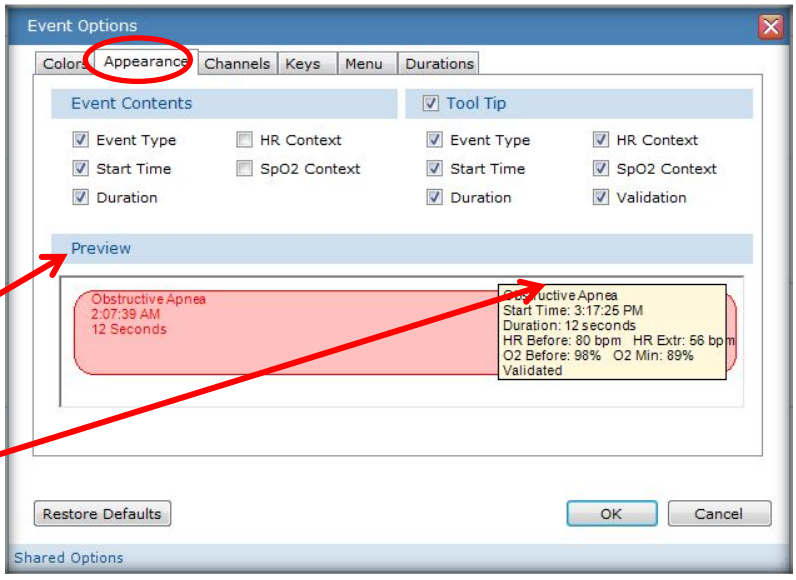


The **Appearance** Tab

This tab allows you to specify the attributes seen on an event marker/label and tooltip.
As you select attributes, the example marker in the Preview area changes in real-time to reflect your selections.

You can select 3 attributes under Event Contents.

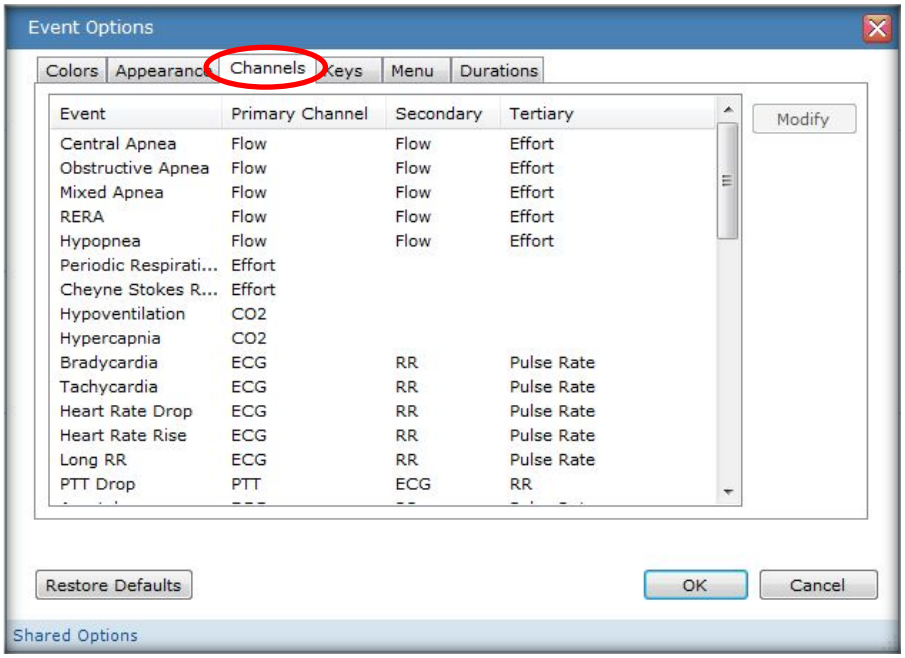
You can select 6 attributes under Tool Tip.



PHILIPS

The **Channels** Tab

Use this tab to specify/modify the rules by which events are displayed on channel types. Each row represents an event type and the default primary, secondary, and tertiary channel used for placing that event when scored.

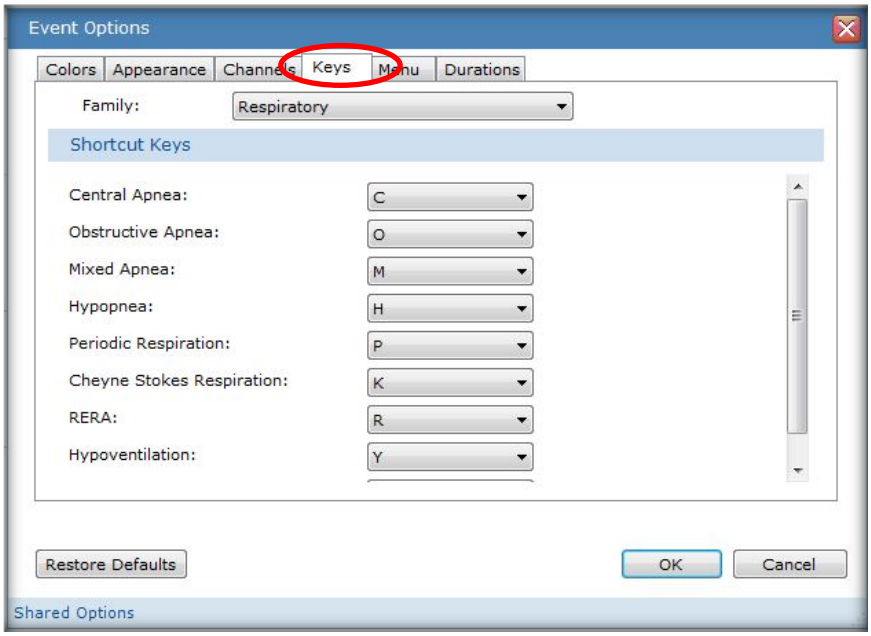


The **Keys** Tab

This tab allows you to associate hot keys with events. The legacy keys have been retained for those who have used earlier versions of Sleepware.

<u>Follow these steps to view/change hot key associations:</u>

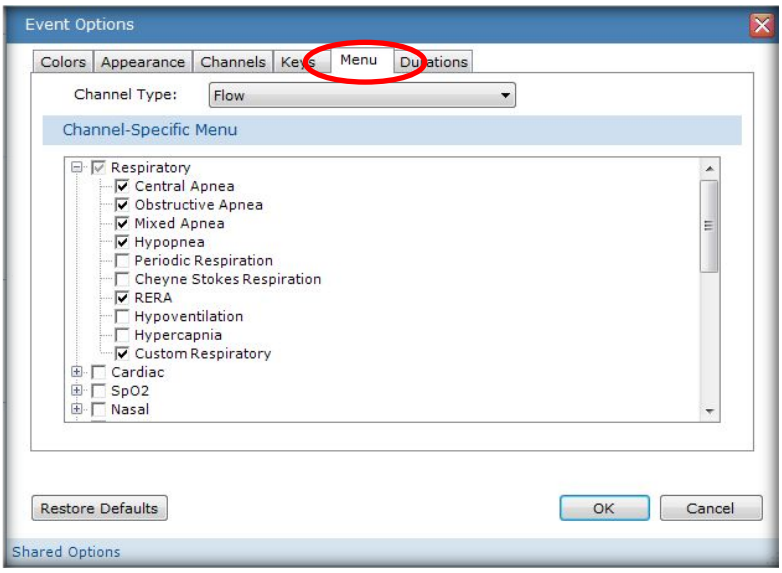
1. Select a **Family** of events from the list. All events associated with that family are displayed.
2. Select a 'hot key' for each from the lists that will represent the specific event.



PHILIPS

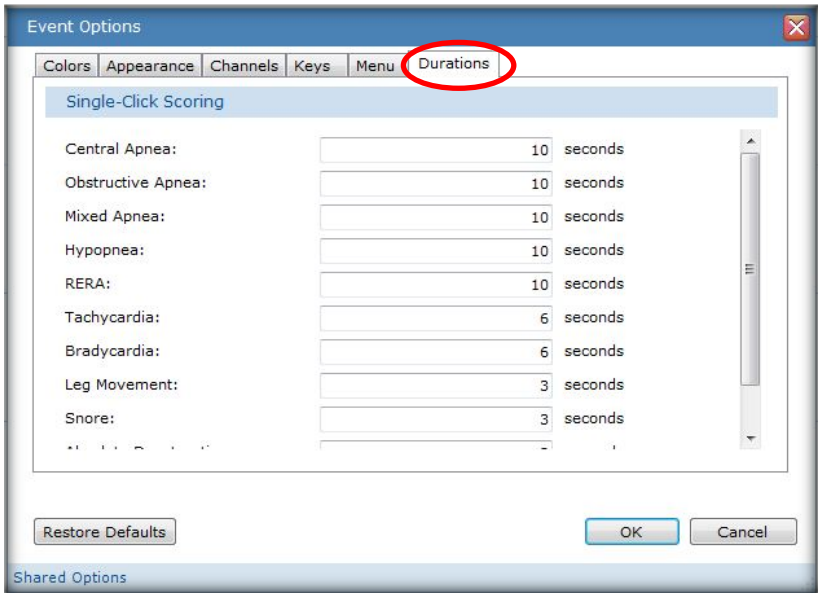
The **Menu** Tab

Use this tab to view/modify the channel-specific event menu definitions for each channel family. The events selected here affect the pop-up menu displayed while scoring.

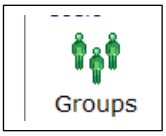


The **Duration** Tab

Use this tab to view/modify the durations for events available for single-click scoring.
Enter the desired value for the specific duration for a given single-click event type.
Click **OK** to save your changes.



PHILIPS



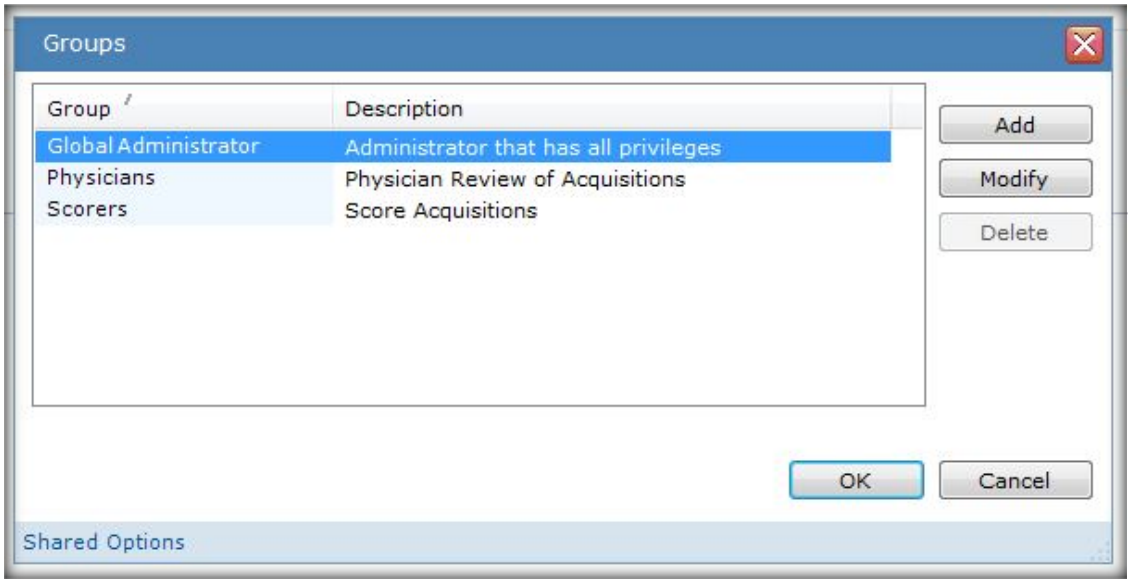
GROUPS

Groups can be created and used to grant or limit users to specific functions of Sleepware G3. Some examples of the permission categories (additional functions within each category) that you may allow or disallow access to include;

- Who can score acquisitions
- Who can Generate reports
- Who can Modify acquisition properties
- Who can Add and remove devices
- Who can Serve as Inter-Scorer Reliability administrator
- Who can Open acquisitions
- Who can Change acquisitions from/to any state (e.g.: New, Scoring, Scored, Verifying/MD Interp., Verified, Complete)
- Who can Modify configuration settings

You may create as many groups as are necessary for your practice. Any User which you add to a Group may also be added to other Groups depending upon you needs. For example, an acquisition Technologist may on other days perform scoring, so they may be part of your Acquisition and Scoring Groups. You may also consider a Group which consists of new or probationary Users. For example, while they may ultimately become an acquisition Technologist, you may wish to restrict certain privileges until they have completed required certifications or performance requirements in your facility.

Double-click on the group icon to see list of default groups. To add a group, select add. To modify or review the permissions of an existing group, highlight the group name and select modify.



PHILIPS

Add a New Group

1. Click the **Configuration** tab.
2. Double-click on **Groups**.

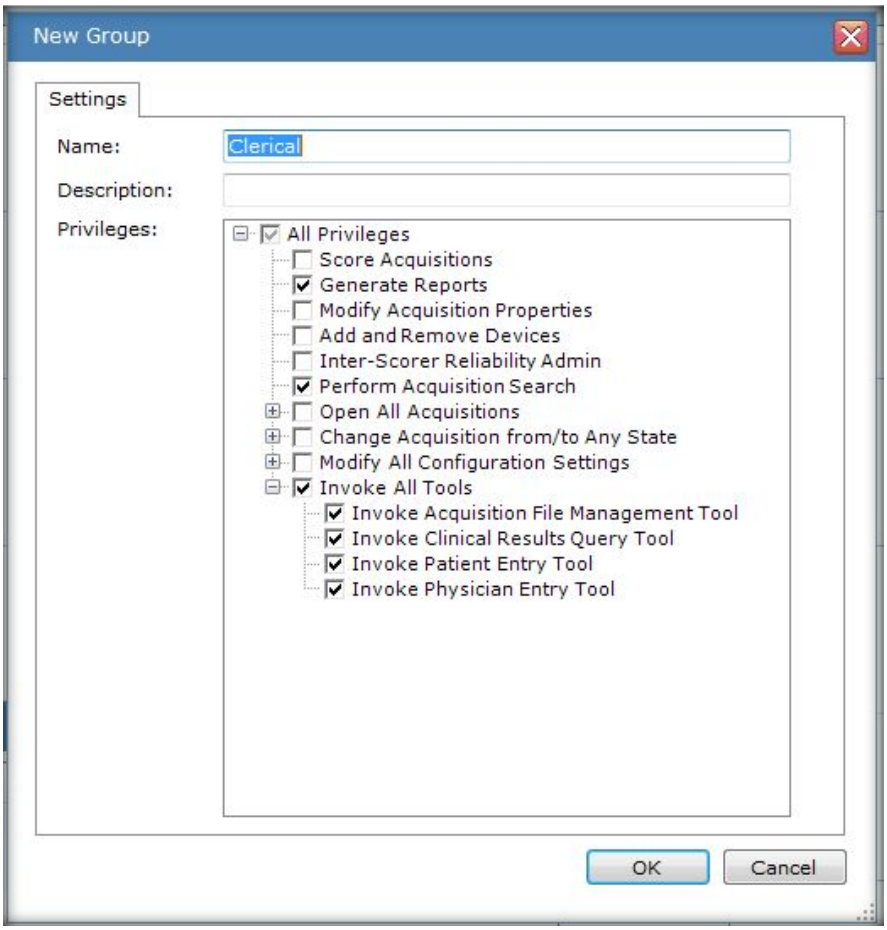
   The Groups window opens.
3. Click the **Add** button.

   The New Group window opens.
4. Enter a **Name** for the group and a brief **Description**.
5. Select all **Privileges** that you want to apply to the new group and click **OK**.

   Note: A dark check mark indicates the user has that privilege. A light gray check mark indicates at least one but not all child privileges are selected. Privileges for the Global Administrator group are all selected and not editable.

   The new group is saved and the window is closed.
6. Click **OK** to save all group changes and close the Groups window.

In this example, we will add a 'Clerical' group and grant them limited access. When this user logs on, they will have access to the functions listed below:



Modify an Existing Group

1. From the Groups window select a group name and click the **Modify** button.

   The Groups window opens. The window contains a **Settings** tab and a **Users** tab. The Settings tab is used to modify the group settings. The Users tab displays a list of all the users that belong to a particular group.

2. Edit the existing **Name** and **Description** text as needed.
3. Select/deselect the necessary **Privileges** and click **OK**.

   The changes are saved and the window is closed.

4. Click **OK** to save all group changes and close the Groups window.

Delete an Existing Group

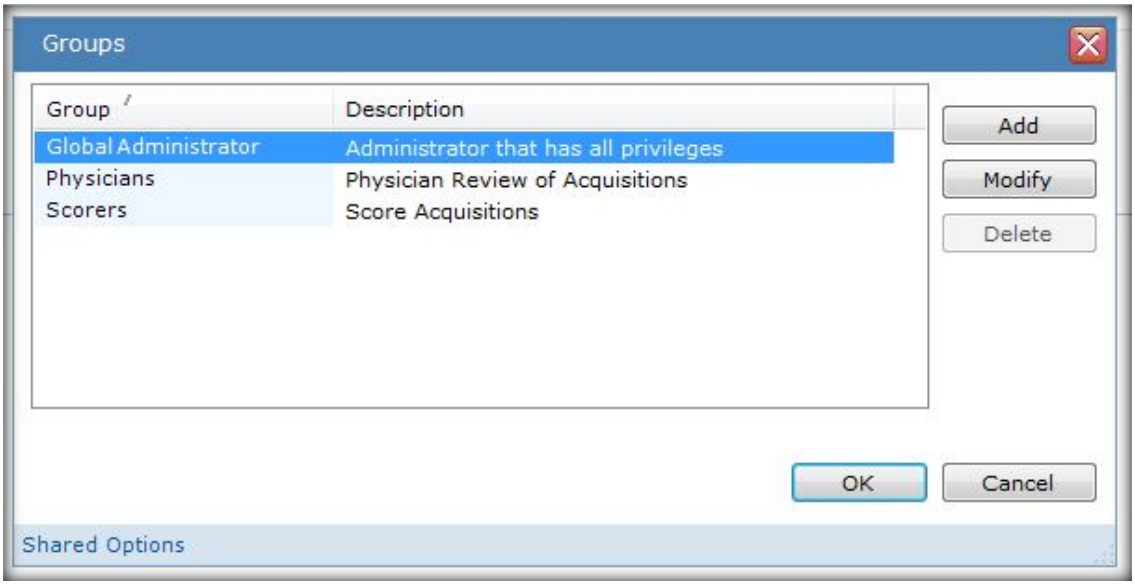
1. From the Groups window select a group name and click the **Delete** button.

   A confirmation prompt is displayed. Note: You cannot delete a group if it is the only group associated with a particular user.

2. Click **Yes** to continue.

   The group is deleted from the database.

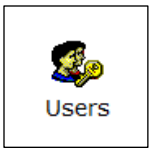
3. Click **OK** to save all group changes and close the Groups window.



*Do Not Delete the Global Administrator Group.

PHILIPS

USERS



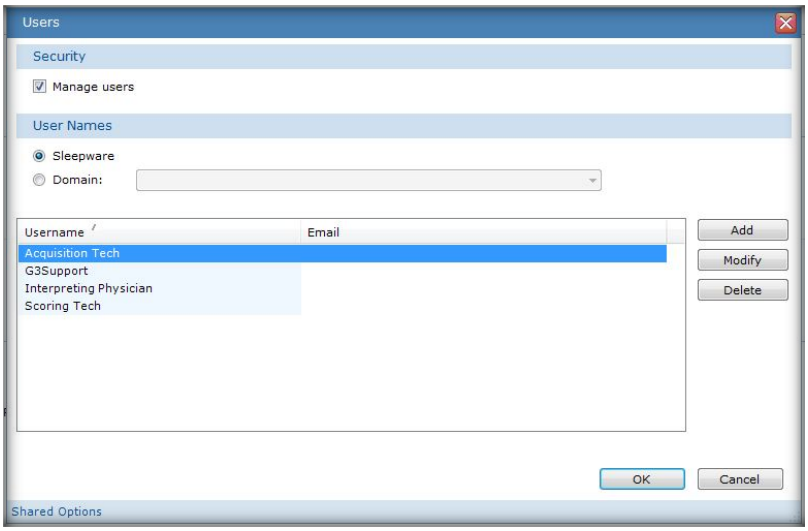
*Users must be created in order to utilize Interscorer Reliability.

Users

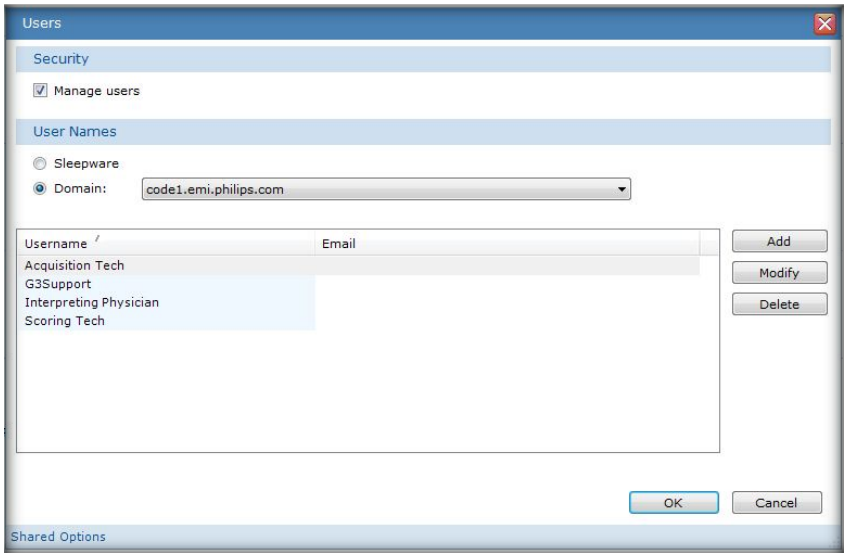
The Users window enables the Sleepware user management feature and add/modify Sleepware users. When Sleepware user management is enabled, Sleepware users must log in to the Sleepware application. Once Sleepware users are active, certain Sleepware features such as privileges and assignments are enabled.

If the **Manage Users** option is selected, the user management feature is enabled.

If the **Sleepware** option is selected when users are added, user names and passwords are created specific to Sleepware. Users must type in their Sleepware user names and passwords when Sleepware is launched. The Sleepware-specific user names and passwords are not the same as user names and passwords used with domain names associated with the user's computer.



If the **Domain** option is selected when users are added, a list of domain names is presented to select from. Any domain name can be added as a Sleepware user. With this option, a separate Sleepware login is not required when launching Sleepware.



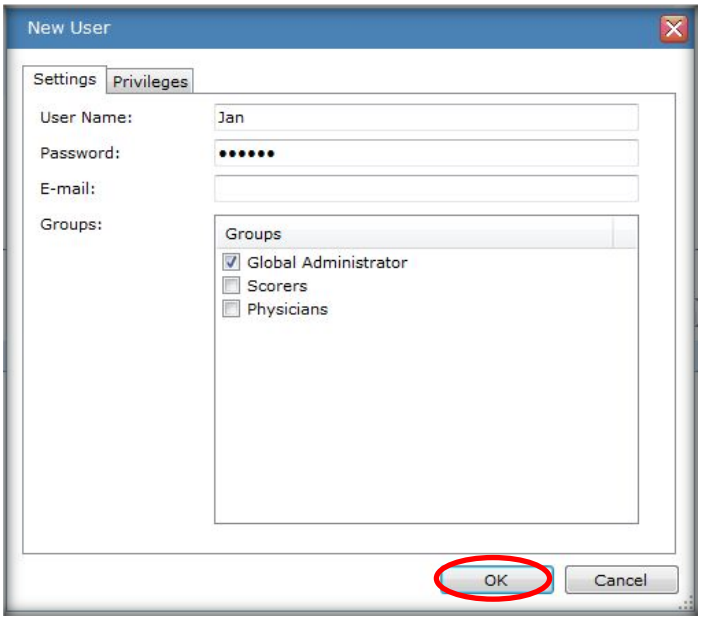
PHILIPS

Add a New Sleepware User

1. Click the **Configuration** tab.
2. Double-click on **Users**.

   The Users window opens.
3. Click the **Add** button.

   The New User window opens.
4. Enter a **User Name**, **Password**, and **E-mail** address in the spaces provided.
5. Select one or more **Groups** to which the user belongs.
6. Click the **Privileges** tab to view the privileges available to the user based on the selected groups. This is a read-only display.
7. Click **OK** to save the user and close the Users window.



Note: When a User is assigned to more than one Group, they "inherit" the combined permissions of the two Groups.

PHILIPS

Modify an Existing Sleepware User

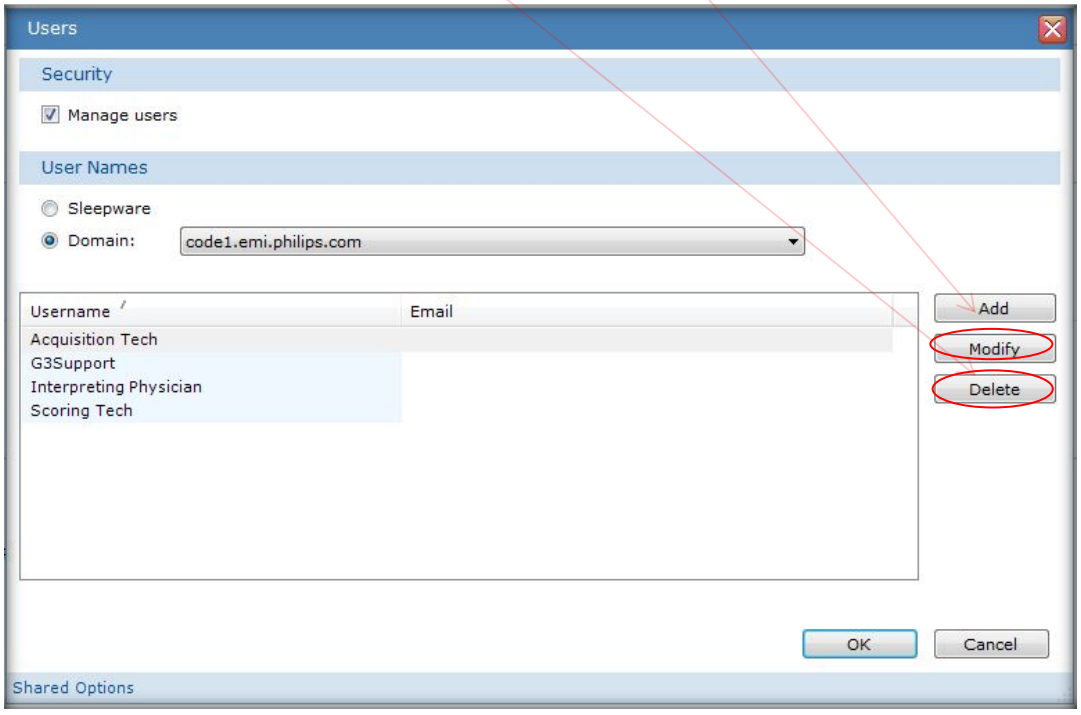
1. Select a user name and click the **Modify** button.

   The New User window opens.
2. Edit the user's information as needed.
3. Select/deselect one or more **Groups** to which the user belongs, as needed.
4. Click the **Privileges** tab to view the privileges available to the user based on the selected groups. This is a read-only display.
5. Click **OK** to save the changes and close the Users window.

Delete an Existing Sleepware User

1. Select a user name and click the **Delete** button.

   A confirmation prompt is displayed.
2. Click **Yes** to continue.
3. The user is deleted from the database.
4. Click **OK** to save changes and close the Users window.



PHILIPS

EDF Import

Sleepware G3 allows you to import an EDF data file from an external system.

To import an EDF file:

Select **File > Import > External EDF Data** from the main menu.

A File Open window is displayed.

Select the EDF file you want to import and click on the **Open** button.

The EDF Import window opens. Patient information is displayed at the top, and EDF channel information is listed at the bottom. The X icon signifies an EDF channel that has not been mapped to a corresponding Sleepware G3 channel. A check mark icon signifies an EDF channel that has been mapped to a corresponding Sleepware G3 channel.

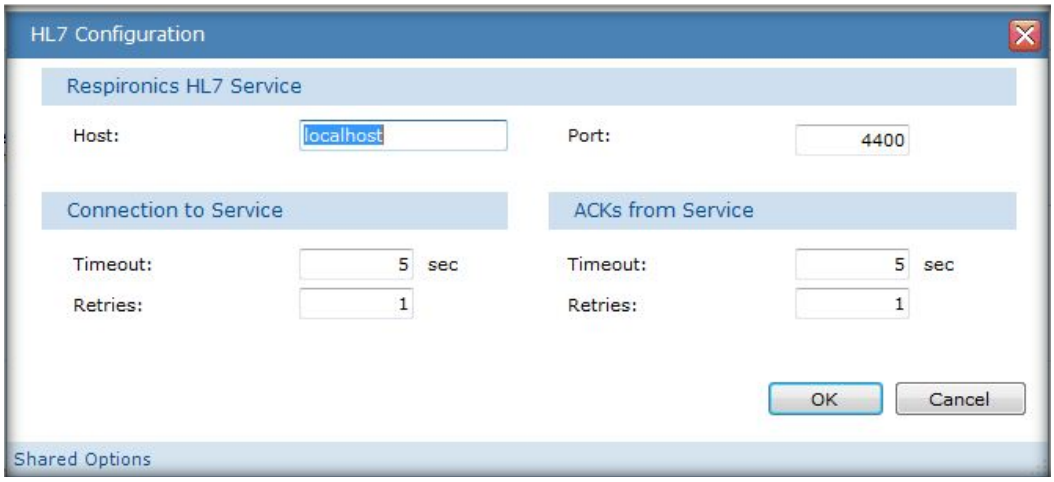
Map the EDF channels to corresponding Sleepware G3 channels by clicking on an EDF channel, clicking on the **Modify** button, and selecting the corresponding Sleepware G3 Type, Specification, and Transducer information. Click **OK** to complete the mapping of the channel. Repeat the mapping until all channels have been mapped.

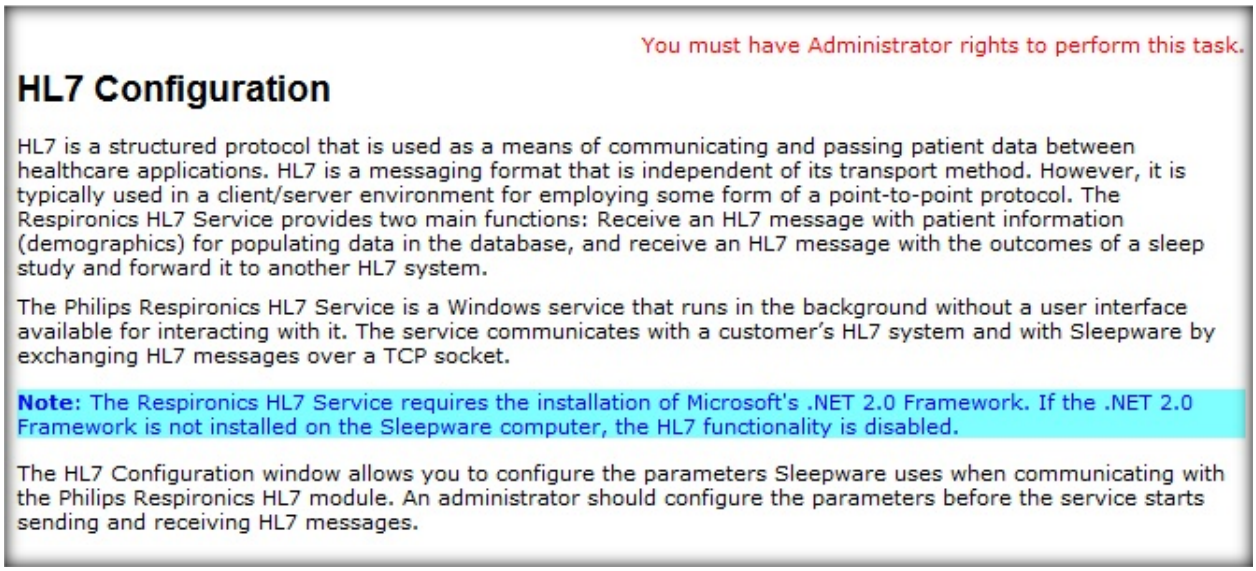
Click on the **OK** button to start the import process.

A progress bar is displayed during the import. Upon completion an acquisition is created in the integration working folder. The acquisition ID is based on the following naming convention: acq number-Edf-IP address of the importing computer. For example: 000000001-Edf-130.140.24.159. The acq number starts at 000000001 and increments by 1 with every EDF import.

PHILIPS

HL7 CONFIGURATION





You must have Administrator rights to perform this task.

HL7 Configuration

HL7 is a structured protocol that is used as a means of communicating and passing patient data between healthcare applications. HL7 is a messaging format that is independent of its transport method. However, it is typically used in a client/server environment for employing some form of a point-to-point protocol. The Respironics HL7 Service provides two main functions: Receive an HL7 message with patient information (demographics) for populating data in the database, and receive an HL7 message with the outcomes of a sleep study and forward it to another HL7 system.

The Philips Respironics HL7 Service is a Windows service that runs in the background without a user interface available for interacting with it. The service communicates with a customer's HL7 system and with Sleepware by exchanging HL7 messages over a TCP socket.

Note: The Respironics HL7 Service requires the installation of Microsoft's .NET 2.0 Framework. If the .NET 2.0 Framework is not installed on the Sleepware computer, the HL7 functionality is disabled.

The HL7 Configuration window allows you to configure the parameters Sleepware uses when communicating with the Philips Respironics HL7 module. An administrator should configure the parameters before the service starts sending and receiving HL7 messages.

*** ***Note***: HL-7 is an optional customized implementation.
Please consult with your Sales Specialist for options and pricing.

PHILIPS

MISCELLANEOUS OPTIONS

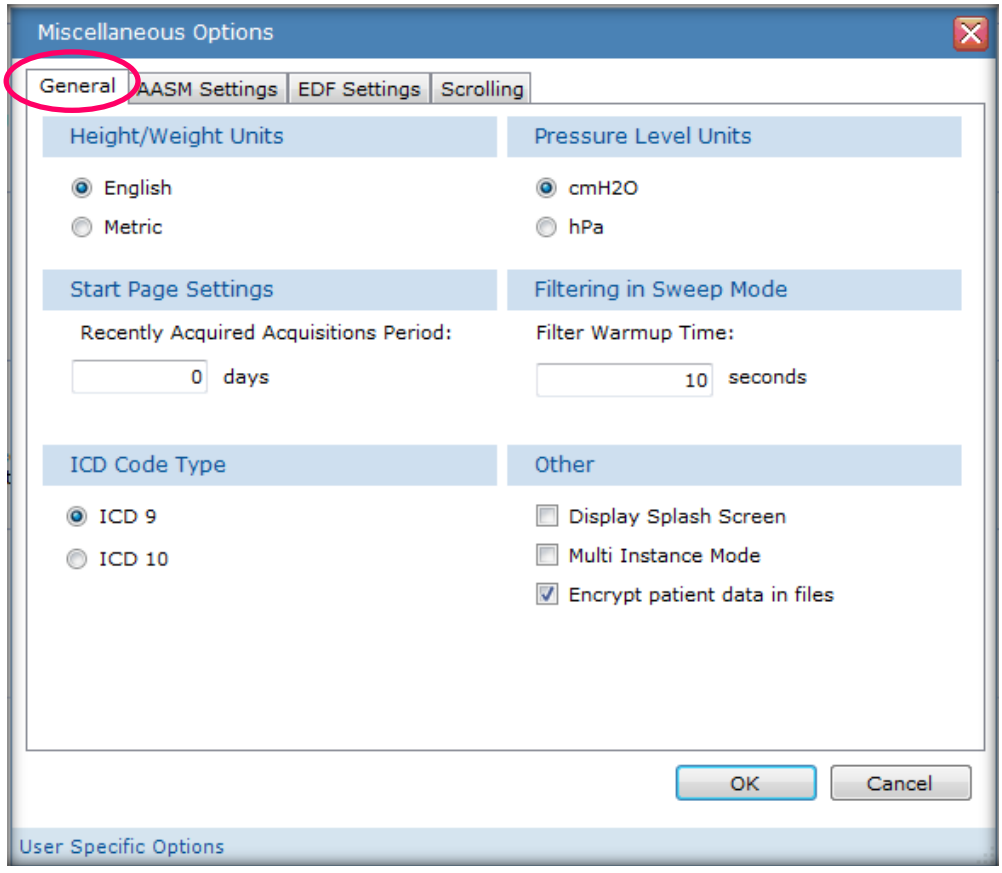
The **Miscellaneous Options** window allows you to establish parameters to be used in the following categories:

- General settings: height/weight units, pressure level units, start page settings, multiple instance mode, encryption, and filtering in sweep mode
- AASM settings: sleep staging, reference electrodes, EOG referencing, logging
- EDF settings: EDF raw data file durations
- Scrolling options: mouse wheel controls, smooth online scrolling, offline scoring speed, scroll thumb control

To set the miscellaneous options:

1. Click the Configuration tab.
2. Double-click the Miscellaneous Options link.

The Miscellaneous Options window opens. The options available under the tabs in this window are explained in the following sections.



The General tab:

Use this tab to assign shared options.

a. Select **English** or **Metric** height/weight units. English is the default.

b. Enter the number of days for which you want to display acquisitions in the **Recently Acquired Acq**uisition Period for the Start Page. The allowable range is 0-10,000, and the default value is 2.

c. Select the applicable **ICD Code Type**: **ICD 9** or **ICD 10**. The default is **ICD 9**.

d. Select **cmH2O** or hPa pressure level units. The default is cmH2O.

e. Enter the number of seconds for **Filter Warmup Time**. The allowable range is 0-30 seconds with 12 seconds as the default.

f. Signal filters can be applied to the waveforms displayed by Sleepware G3. These signal filters are recursive digital filters where the first output samples contain transient activity that is not physiological and which should not be displayed. The warm-up time is the amount of off-screen data that is passed through the recursive filter before displaying a filtered epoch. Stated another way, using the default setting for Filter Warm-up Time, when a signal filter (i.e., lowpass, highpass, QRS) is applied in sweep mode, 12 seconds of data immediately prior to displaying the epoch were passed through the filter before drawing the first sample at the left of the screen.

g. Select the **Display Splash Screen** option if you want to see the Sleepware G3 splash screen displayed each time Sleepware G3 starts. It is enabled by default. You may want to turn it off when using a remote desktop.

h. Select the **Multiple Instance Mode** option if you want to view acquisitions from multiple Alice base stations connected to the same computer. After selecting the option you must restart Sleepware in order for this to take effect. Upon restart, select a device (if more than one is available) to be "bound" to the current instance of Sleepware. In this mode you will not be able to add devices.

i. Select the **Encrypt patient data** in files option to increase security of patient and physician data by encrypting the files stored on the computer. The RML file associated with each acquisition is encrypted.

The **AASM Settings** tab

This tab allows you to configure various options related to the AASM (American Academy of Sleep Medicine) Manual for the Scoring of Sleep and Associated Events.

a. In the Sleep Staging group, choose either **R & K** or **AASM**. The default is AASM. This setting affects the sleep stage nomenclature that is displayed and reported.

b. In the Reference Electrodes group, choose either **A1/A2** or **M1/M2**. The default is M1/M2.

   AASM requires the use of the M1/M2 reference electrodes. Traditionally, Alice systems have utilized A1/A2. When set to M1/M2, Sleepware provides the ability to use the M1/M2 electrodes in the Alice PDx Configuration Builder, and when adding an EEG channel.

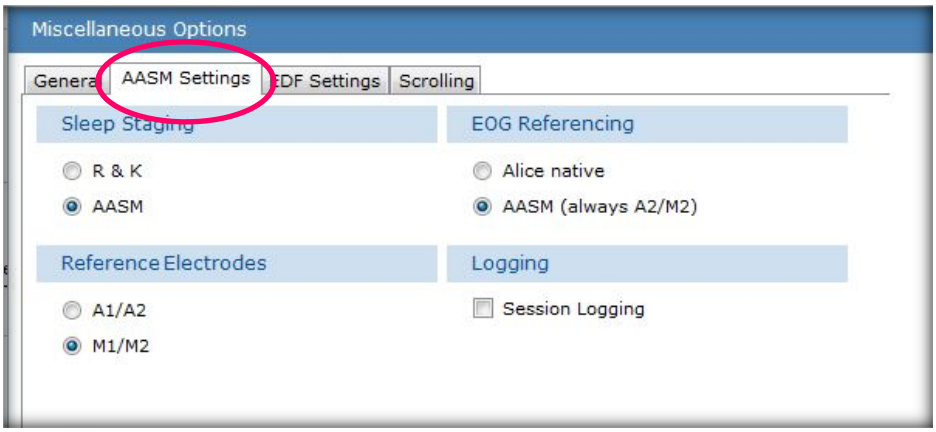
   For installations requiring the AASM standard, M1/M2 should be selected.

c. In the EOG Referencing group, choose either Alice native or AASM (always M1/M2). The default is AASM (always M1/M2).

   When selected, Sleepware will re-reference EOG channels so the common reference A2/M2 is utilized. This is needed for most Alice device configurations since the EOG channels utilize A1/M1 and A2/M2 as their references. When the EOG channels have been re-referenced to the AASM standard, an information balloon appears in the EOG channel labels with the state of "Derived." If this symbol does not appear, the channels were not re-referenced and are using the native Alice EOG re-referencing that was configured.

   Note: When configuring an Alice 5/Alice 6/Alice LE acquisition, the sampling frequency for EOG and EEG needs to be identical for any EOG re-referencing to occur.

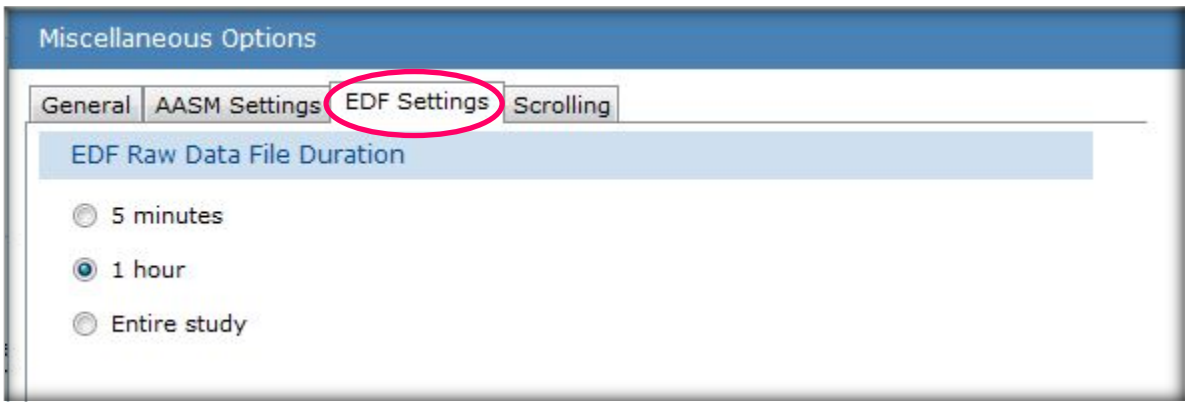
d. In the Logging group, select **Session Logging** if you want to record view options and signal filters used during real-time acquisitions and when scoring is done in post-acquisition mode. By default, this option is not selected. The combination of workspaces and session logging allows the user to recreate the display environment used for online acquisition and offline scoring. The workspace provides the initial layout for a particular session and the session log can used to observe any key changes possible made to the workspace.



The **EDF Settings** tab

a. Choose to either create Alice 5/Alice 6/Alice LE studies in **5-minute**, **1-hour** EDF files or a single EDF file (**Entire study** option).

   This setting does not apply to Alice PDx and combined studies.



The **Scrolling** tab

a. In the Mouse Wheel group, choose either **Scroll one page** or **Scroll seconds** and type the number of seconds you want Sleepware to scroll in the space provided. The default is Scroll one page.

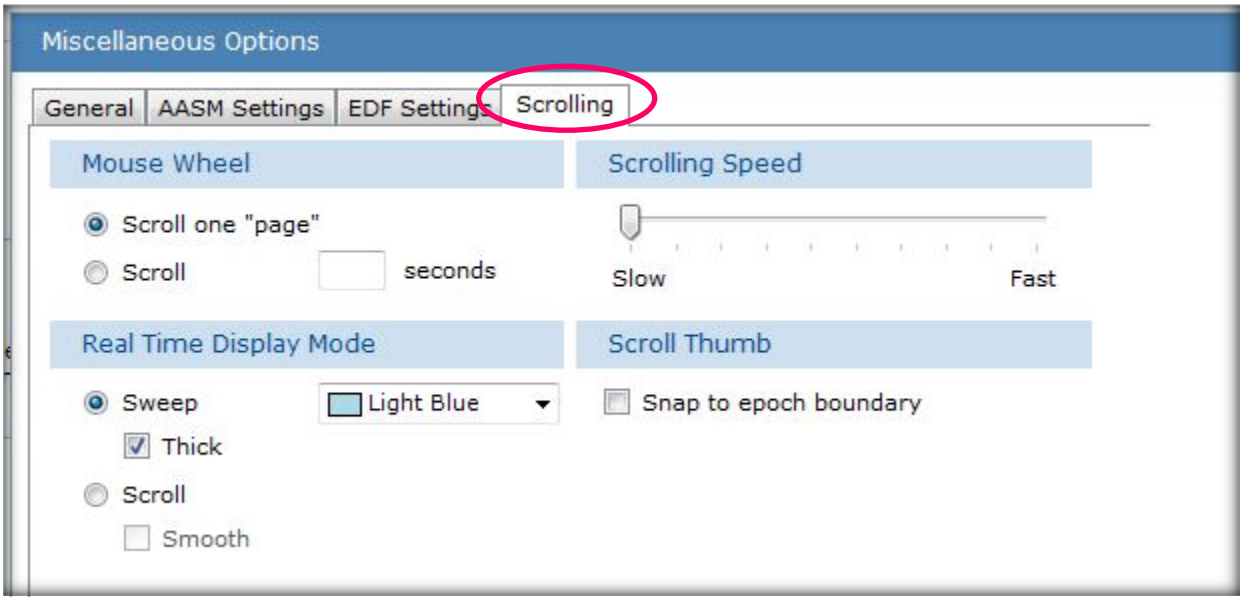
b. In the Real Time Display Mode group, there are two real-time options available: **Sweep** or **Scroll**. The Sweep option displays a sweep line that moves from left to right. Click the **Thick** check box to make the line visibly thick, and choose a color for the line from the drop-down list. The Sweep option is the default. You can configure the color of the sweep line and whether the line is thin or thick.

c. The **Scroll** option scrolls the data horizontally from right to left. If you select the **Smooth** option, the display will scroll without hesitation. If not selected, the display scrolls in 1 second intervals.

d. In the Scrolling Speed group, left-click on the speed indicator and drag it to the desired speed. This setting is used when the automatic forward or reverse scrolling feature is used in offline mode.

e. In the Scroll Thumb group is the option to **Snap to epoch boundary**. This applies to the raw data and trend views. If the option is checked and the zoom level is 30 seconds or greater, releasing the scroll thumb control while dragging it causes the left edge of the view to be epoch-aligned. If the option is not checked, the left edge of the view will be at the exact time displayed in the tool tip.

3. Click **OK** to save changes and close the window.



PHILIPS

NEURO OPTIONS

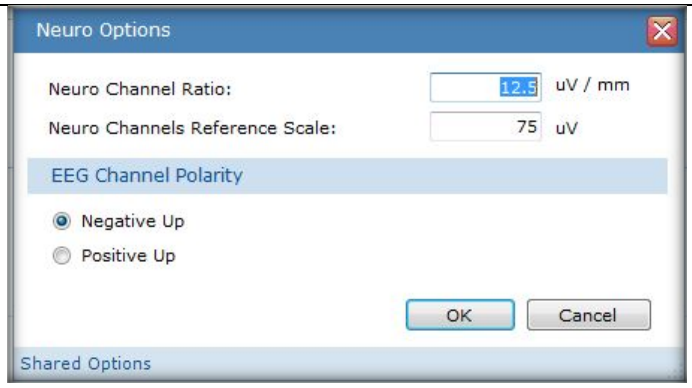
Neuro Options

The Neuro Options window lets you view/modify neuro options at the application level.

To modify the neuro options:

1. Click the **Configuration** tab.
2. Double-click the **Neuro Options** link.

   The Neuro Options window opens.
3. Enter a value for the **Neuro Channel Ratio**. The range is 0-500; the default is 12.5.
4. Enter a value for the **Neuro Channels Reference Scale**. The range is 0-300; the default is 75.
5. Choose **Negative Up** or **Positive Up**. The default is negative up.
6. Click **OK** to save changes.



OPTIONS PREFERENCES

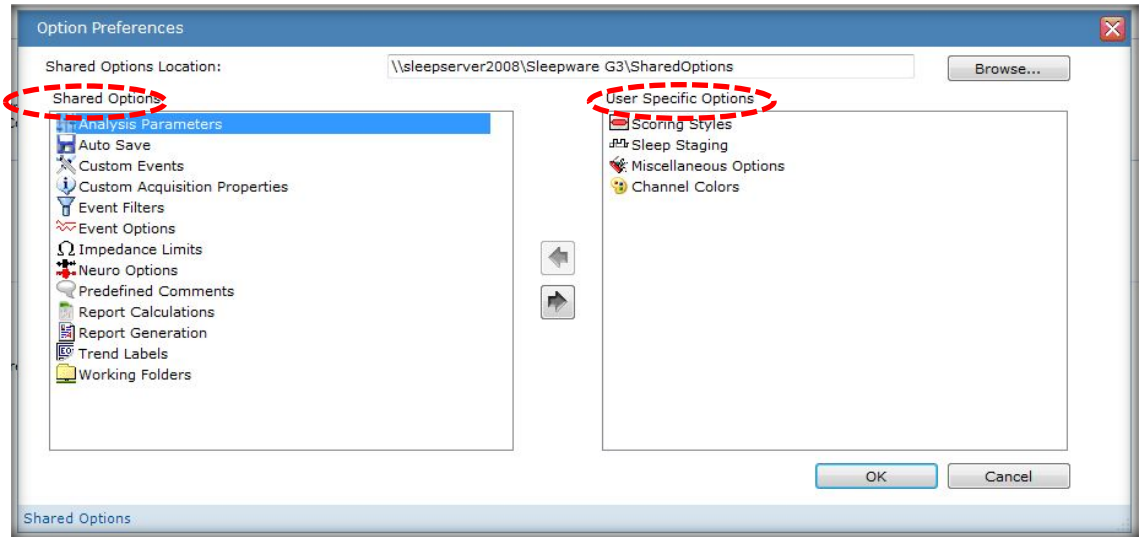
Option Preferences

The Option Preferences window allows you to select whether an application option is shared or user specific. Shared options are stored in the folder designated by the Shared Options Location. Typically, this would be a shared network drive. User-specific options are stored locally on the computer.

To set the option preferences:

1. Click the **Configuration** tab.
2. Double-click the **Option Preferences** link.

   The Option Preferences window opens.
3. (Optional) Click the **Browse** button to change the **Shared Options Location**, or accept the default location.
4. Select an option (from either side) then click the or button to move the option to either the **Shared Options** list or the **User Specific Options** list.
5. Click **OK** when finished.



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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NETWORK DEVICE SETUP

Use the Network Device Setup window to modify the Alice device to which Sleepware is communicating.

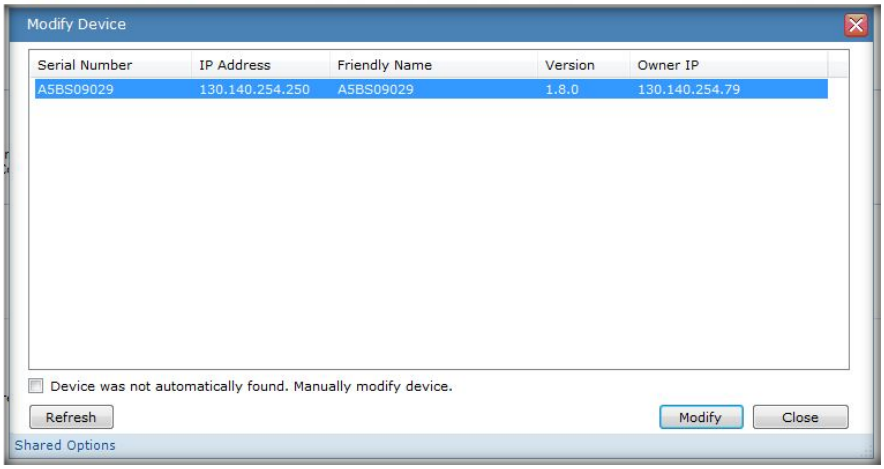
Modify a Device

1. Double-click on **Network Device Setup** under the **Configuration** tab.

   The Modify Device window opens.

2. Select a **Device Type** by clicking on it and then click the **Modify** button.

   The Modify Device window opens.



3. If the device you are looking for is not listed, click the **Device was not automatically listed** check box, then click **OK** to add it.

   The Add Device details window opens.

   a. Enter a **Device name** (which is also the **Friendly Name** displayed on the Add Device window).

   b. Enter the **IP address** of the device.

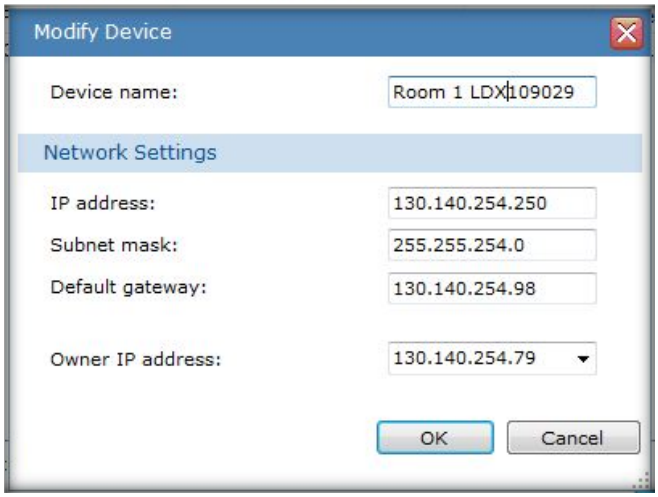
   c. Enter the **Subnet mask** for this address

   d. Enter the **Default gateway** address.

   e. Select the appropriate **Owner IP address** for your computer from the list.

   f. Click **OK** to save changes and return to the previous window.

4. If the device you are looking for is listed, select it and click **OK** to add it.

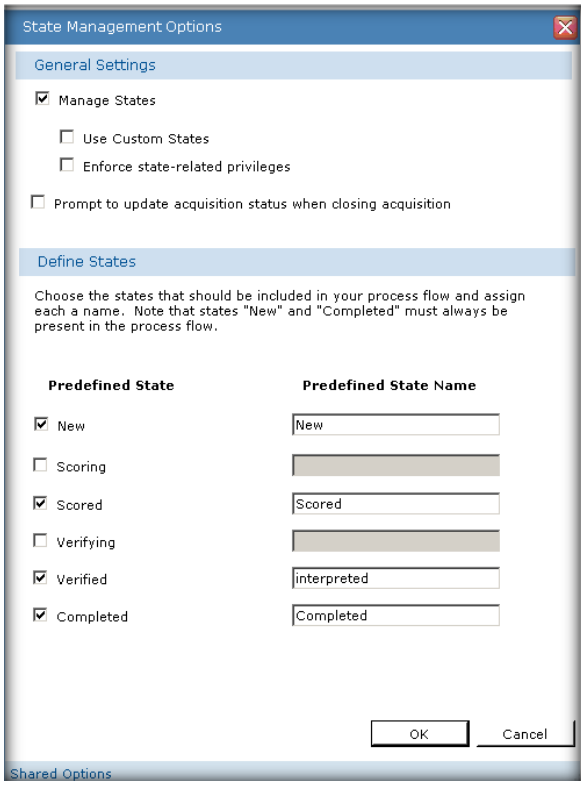


PHILIPS

STATE MANAGEMENT

The State Management window allows you to manage the states assigned to acquisitions. States allow acquisitions to be tracked as they progress through a work flow. Every acquisition in Sleepware G3 has a state, which is stored in the RML file. The state is also stored with the acquisition in the database, and it can be used as a filter in various queries within Sleepware G3.

In addition to the states themselves, Sleepware G3 provides a set of privileges and rules that are related to states. State-related privileges apply to the different user types and include those that pertain to opening an acquisition in a specific state, changing the state of acquisition from/to specific states, and allowing users to score acquisitions. State-related rules restrict updates to acquisitions unless they are in a certain predefined state.



When setting up state management, there are two basic choices:

- Custom states
- Predefined states

Custom states are for installations that want to have the most flexibility in defining the workflow for the lab. With custom states, there are no state transition rules or privileges. Any user can set an acquisition to any state at any time.

Predefined states should be used for installations that wish to utilize state related privileges and rules. With this option, Sleepware G3 provides a set of predefined states.

State management options can be shared or user-specific. The shared versus user-specific behavior can be changed in the Options Preferences window. If the state management options are shared, they can only be changed by users that have the “Modify State Management Options” privilege.

General Settings

1. Select the **Manage States** option if you want Sleepware G3 to manage acquisition "states":
    a. **Use Custom States** - Selecting this option enables you to establish and use up to five custom states.
    b. **Enforce state-related privileges and rules** - This option tells Sleepware G3 to enforce the use of state-related privileges. This option is not available when using Custom States.
2. Select whether to **Prompt to update acquisition status when closing an acquisition** by clicking the associated check box.
3. The Define States area behaves differently if you are using custom or predefined states.

For custom states, the window displays the New state, five custom states, and the Completed state. The New and Completed states are required; however, you can select any number of the custom states to use. You can also specify the name of the each custom state.

For predefined states, the window displays the following predefined states:

- **New** – An acquisition starts out in the New state.
- **Scoring** – Used by sleep technicians, lab managers, and physicians who want to make changes to the acquisition. Only acquisitions in the Scoring state can be modified. Scoring can only be done by users that have the “Score Acquisitions” privilege. This privilege is not related to states. It is a general purpose privilege whose purpose is to prohibit some users from ever scoring an acquisition. For those users who do have the “Score Acquisitions” privilege, scoring is always allowed if state-related privileges are not being enforced. If they are being enforced, the acquisition can only be scored when the acquisition is in the Scoring state, except for one exception: If the Scoring state is not configured, an acquisition can be scored in any state, regardless of whether state-related privileges are being enforced. If the enforcement of states is in effect and the Scoring state is configured, any attempt to change the scoring will display an error message.
- **Scored** – Once an acquisition has been initially scored, it should be placed in the scored state. This means it is ready for review.
- **Verifying** – This state indicates the acquisition is currently under review. During the review, if the acquisition needs to be modified, the reviewer would need to set the state back to scoring.
- **Verified** – This state indicates the acquisition has been reviewed/verified and is ready to be set to the completed state.
- **Completed** – This state indicates all activities have been completed for the acquisition.

The New and Completed states are required, however you can select any number of the predefined states to use. You can also specify the name of each predefined state. When changing the name of the predefined states, the new name of the state should reflect the general meaning of the predefined state. For example, if your installation uses the term “Reviewing” rather than “Verifying”, you may wish to modify the name of the Verifying state to “Reviewing”.

By default, all six predefined states are configured and their default user names match the state name. Therefore, by default, if state management is enabled, the exact same states with the exact same names are available.

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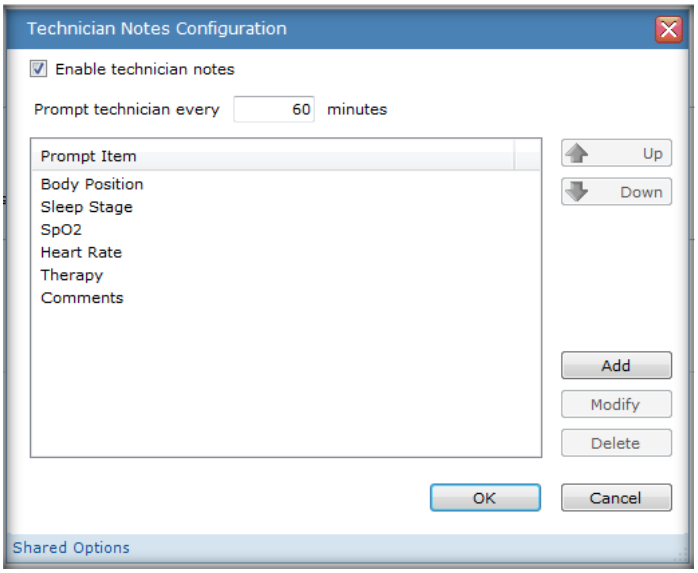
TECHNICIAN NOTES

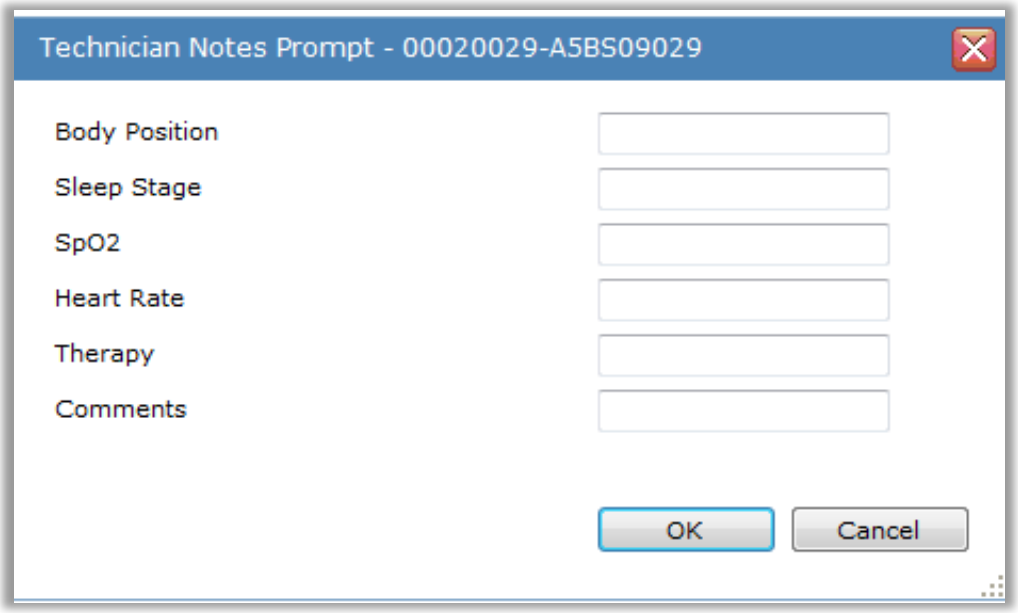
To view the Tech Notes that were entered for an acquisition, select **File > Technician Notes** from the main menu. The Technician Notes prompt windows and summary window are not displayed on Read-Only computers.

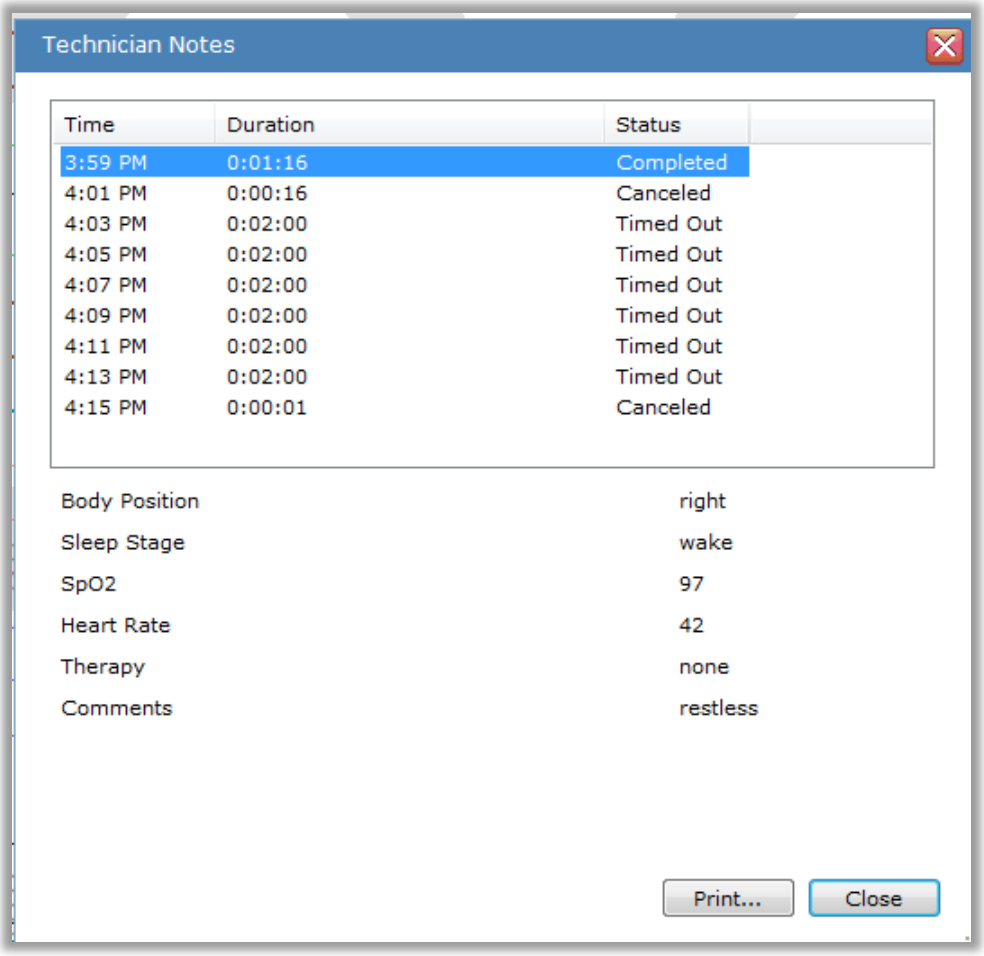
Technician Notes
The Technician Notes feature provides prompts that are presented to the operator in a pop-up window during the study at a configurable pre-determined frequency. The technician must respond to each prompt by either entering a response to the prompt or by clicking the **Cancel** button.

CONFIGURING TECH NOTES

1. Click the **Configuration** tab.
2. Double-click the **Technician Notes** link. The Technician Notes Configuration window opens.
3. Select the Enable technician notes option to enable this feature. Once selected, the other options in the window become available for configuration.
4. (Optional) The default time at which the technician is prompted is 60 minutes, but you can change that by entering a different value.
5. Several default prompts are already provided. To change an existing prompt, select it and click **Modify.** The Technician Notes Prompt Item window is displayed.
6. Edit the text as needed, and click **OK** to save your changes.
7. To add a new prompt, click the **Add** button. The Technician Notes Prompt Item window is displayed.
8. Enter the new prompt text, and click **OK** to save your changes.
9. To delete an existing prompt, select the prompt and click the **Delete** button.
10. To reorder the list of prompts, select a prompt and click the **Up** and **Down** buttons as needed to reorder the list.
11. When finished modifying the list of prompts, click the **OK** button to save your changes and close the window.


Technician Notes Configuration
Enable technician notes
Prompt technician every
60
minutes
Prompt Item
Body Position
Sleep Stage
SpO2
Heart Rate
Therapy
Comments
Up
Down
Add
Modify
Delete
OK
Cancel
Shared Options


Technician Notes Prompt - 00020029-A5BS09029
Body Position
Sleep Stage
SpO2
Heart Rate
Therapy
Comments
OK
Cancel


Technician Notes
Time
Duration
Status
3:59 PM
0:01:16
Completed
4:01 PM
0:00:16
Canceled
4:03 PM
0:02:00
Timed Out
4:05 PM
0:02:00
Timed Out
4:07 PM
0:02:00
Timed Out
4:09 PM
0:02:00
Timed Out
4:11 PM
0:02:00
Timed Out
4:13 PM
0:02:00
Timed Out
4:15 PM
0:00:01
Canceled
Body Position
right
Sleep Stage
wake
SpO2
97
Heart Rate
42
Therapy
none
Comments
restless
Print...
Close

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IMPEDANCE LIMITS

Impedance Limits

Measured impedance values for the EEG, EOG, EMG, leg EMG and ECG channels can be displayed in Online and Offline view for Alice base station acquisitions.

The impedance values are used to evaluate signal quality resulting from electrode installation. When enabled, the channel impedance quality is displayed with a colored bar in the channel label that is based on user-configurable impedance thresholds.

Optionally, you can display the actual impedance values in the channel label: Select **View > Impedance Values** from the main menu bar. Note that the values are based on the currently selected time scale. For example, as you change time scales from 15 seconds, 30 seconds, 60 seconds, etc., the values always represent the average channel impedance relative to those time scales.

Note: Impedance color bars are not displayed for Alice LE acquisitions in real-time or offline views. Only the optional impedance values in the channel label are available for Alice LE.

To set the impedance limits:

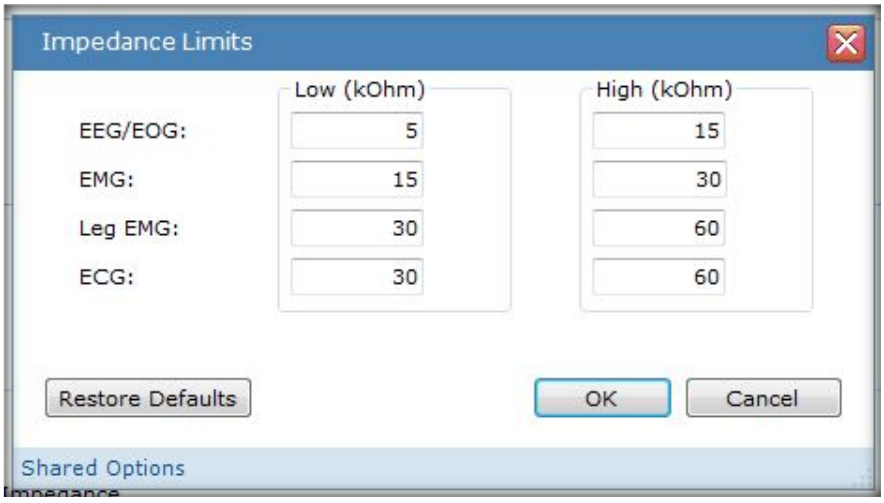
1. Click the **Configuration** tab.
2. Double-click the **Impedance Limits** link.

   The Impedance Limits window opens.
3. Configure the Low and High values for the following:
   - **EEG/EOG**. Defaults are 15 (low) and 15 (high).
   - **EMG**. Defaults are 15 (low) and 30 (high).
   - **Leg EMG**. Defaults are 30 (low) and 60 (high).
   - **ECG**. Defaults are 30 (low) and 60 (high).
4. Click **OK** to save changes and close the window.

The configured thresholds define three levels of impedance quality:

Level	Channel Label Color Code	Condition	Meaning
LOW	Light green	Value less than or equal to low threshold	The impedance is considered to be of good quality
MEDIUM	Dark green	Value is between low and high thresholds	The impedance is considered to be of medium quality
HIGH	Red	Value is greater than or equal to threshold	The impedance is considered to be of bad quality

Note: The numerical impedance values shown in the raw data waveform window are based on the same color codes.



Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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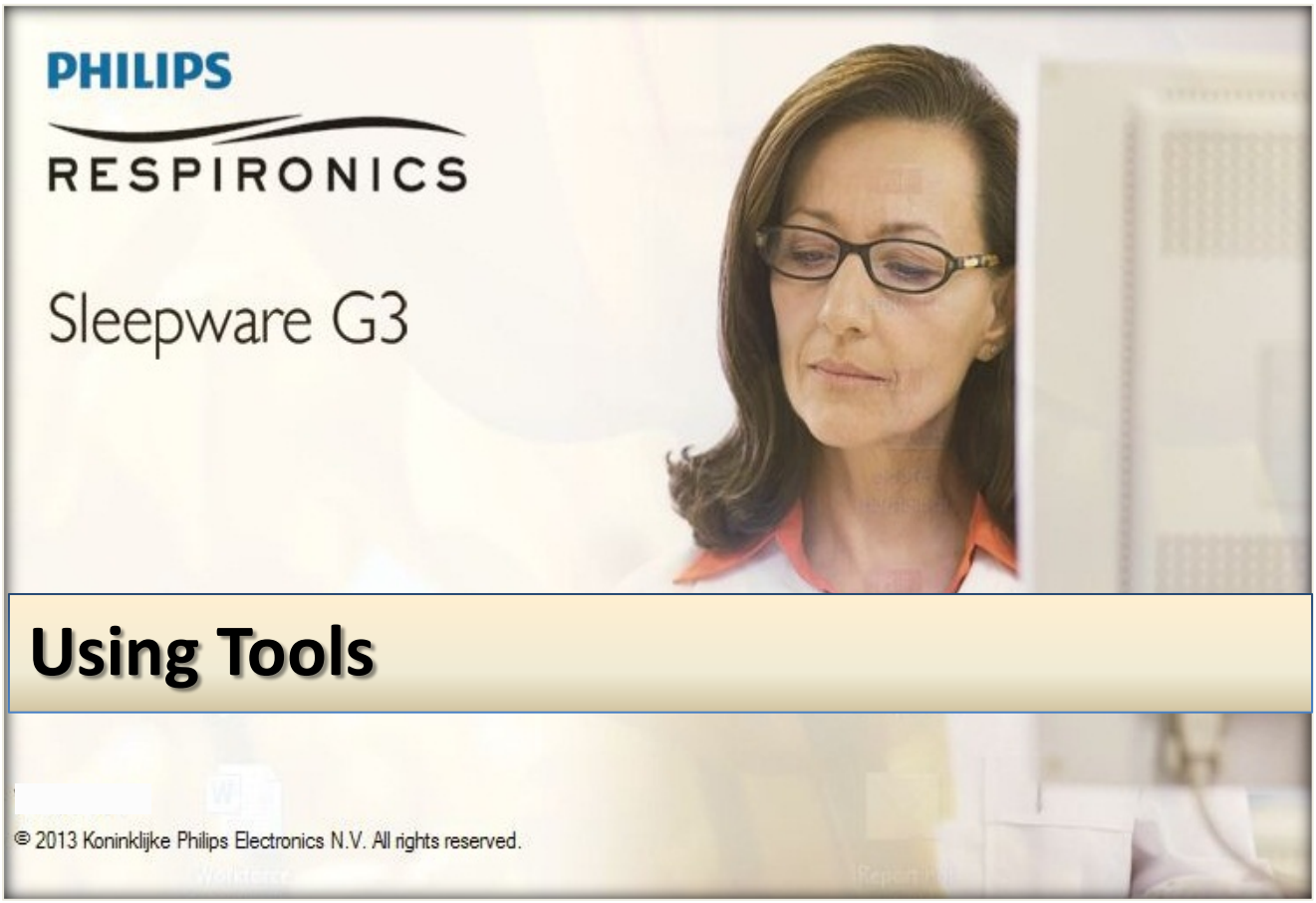
G3 Training Module



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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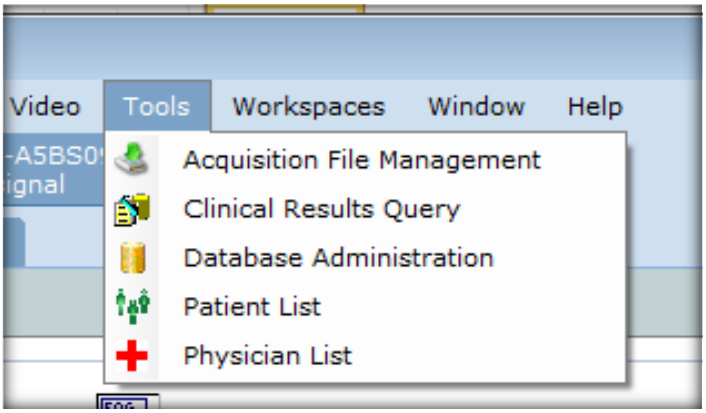
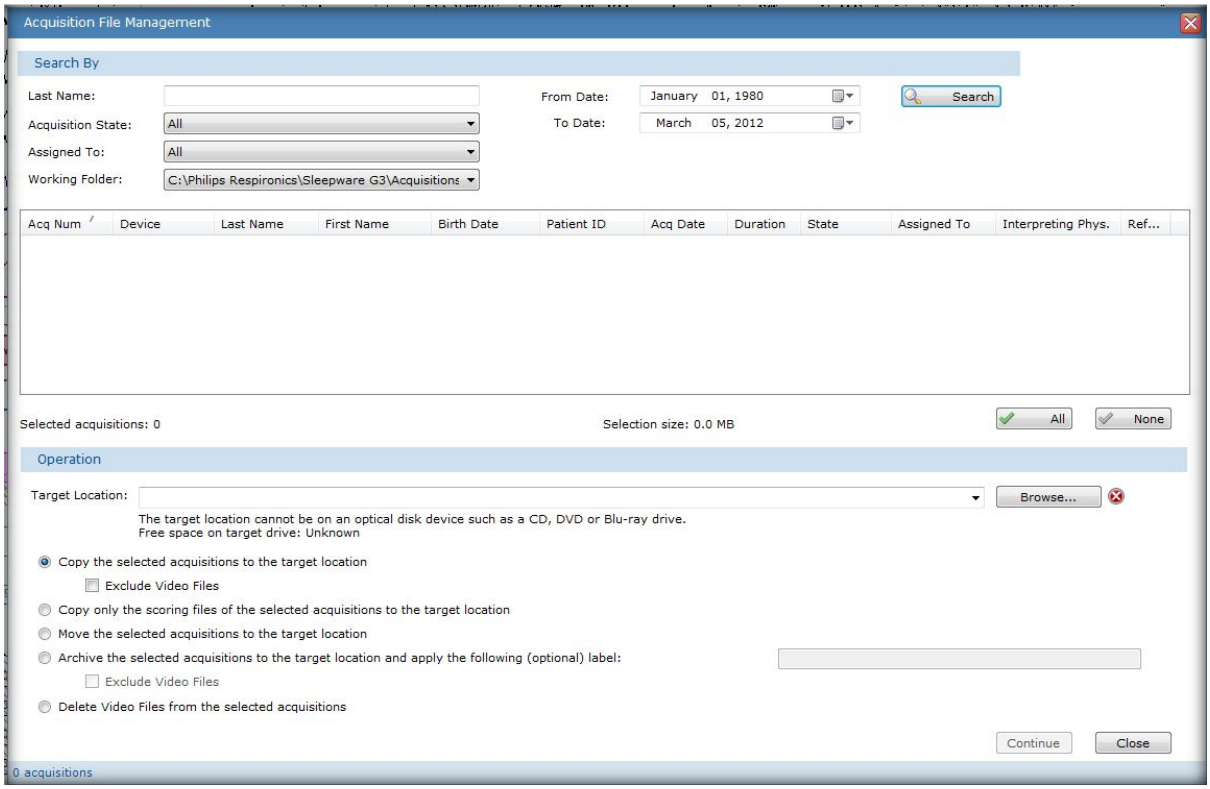
Acquisition File Management

From the Main Menu, click on Tools to display a dropdown menu of options.



The Acquisition File Management window allows you to search for, then copy, move, or archive existing acquisition files to user-specified locations. **The source folder for this operation must be a Sleepware G3 working folder.**



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To Search for Acquisition Files, you may select any or all of the following:

Enter a full or partial name in the **Last Name** box.

> **Note:** You can also use a wildcard character (“*”) to represent any number of characters within the name. Some examples for the name “Johnson” include “Jo*n”, “Jo*”/ and “*son”.

Select an **Acquisition State** from the list.

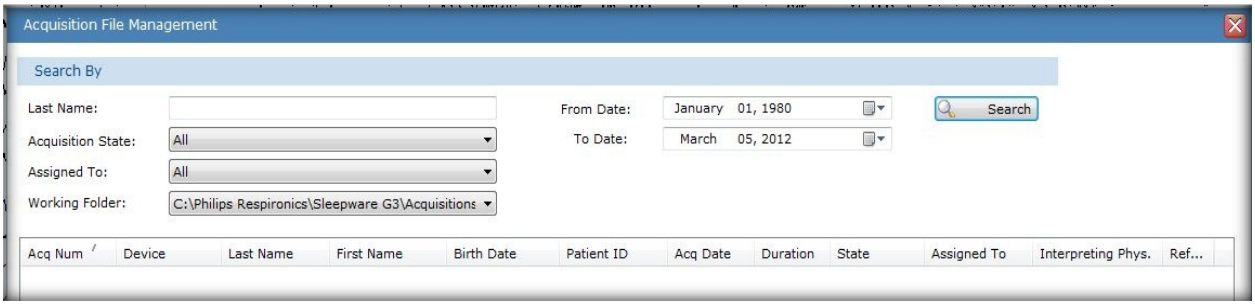
Select a **From Date** from the list.

Select a **To Date** from the list.

Select an applicable Sleepware user from the **Assigned To** list.

Select a folder from the **Working Folder** list.

Click the **Search** button.



All acquisitions satisfying the search criteria are listed below the drop-down lists.
The list consists of all the acquisitions meeting the search criteria.
Acquisitions that have been previously archived are not shown.
You can sort the results, in ascending or descending order, by clicking on the column headings.

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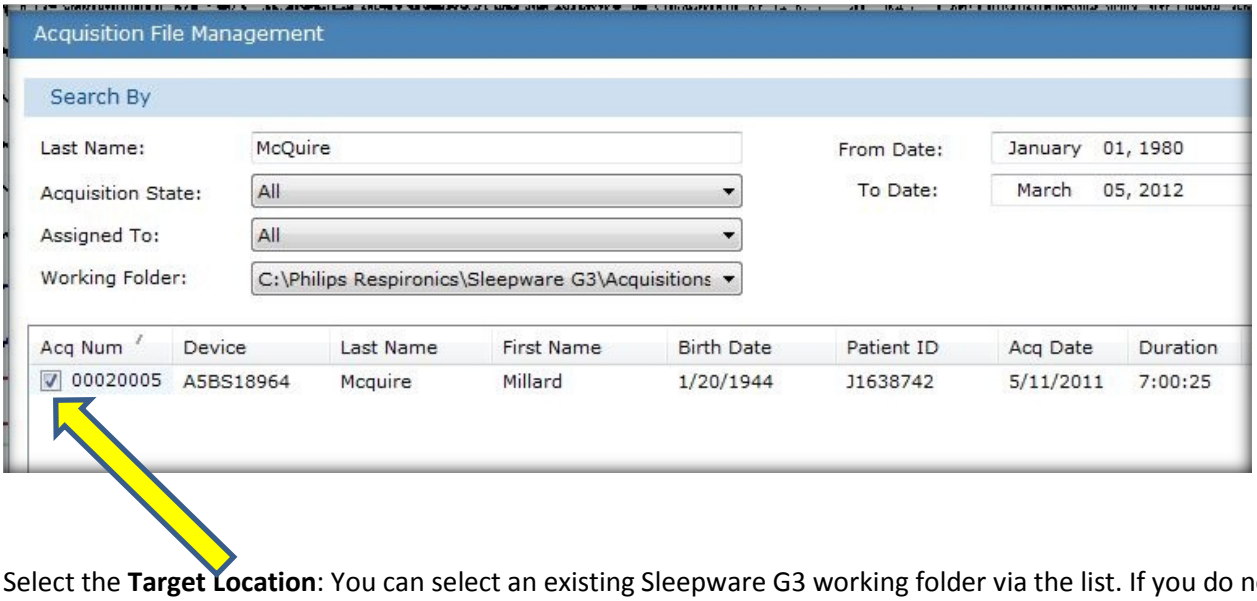
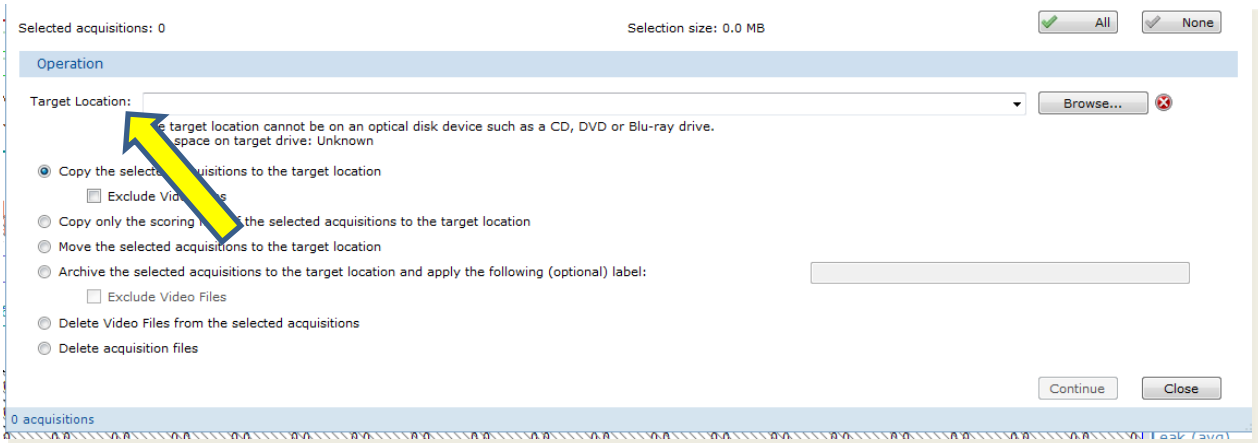
To Manage Acquisition Files:



Select the **Target Location**: You can select an existing Sleepware G3 working folder via the list. If you do not want to use a working folder as the target you can enter the path to a destination folder in the Target Location box, or click the **Browse** button to navigate to the destination folder.

*The target location cannot be on an optical disk such as a CD, DVD or Blu-ray.

If you want to move/copy/archive acquisition files directly to an optical drive, refer to Using Microsoft Windows to Copy Acquisition Files to CD/DVD for that function after you have collected your acquisitions in the designated target location using Acquisition File Management.



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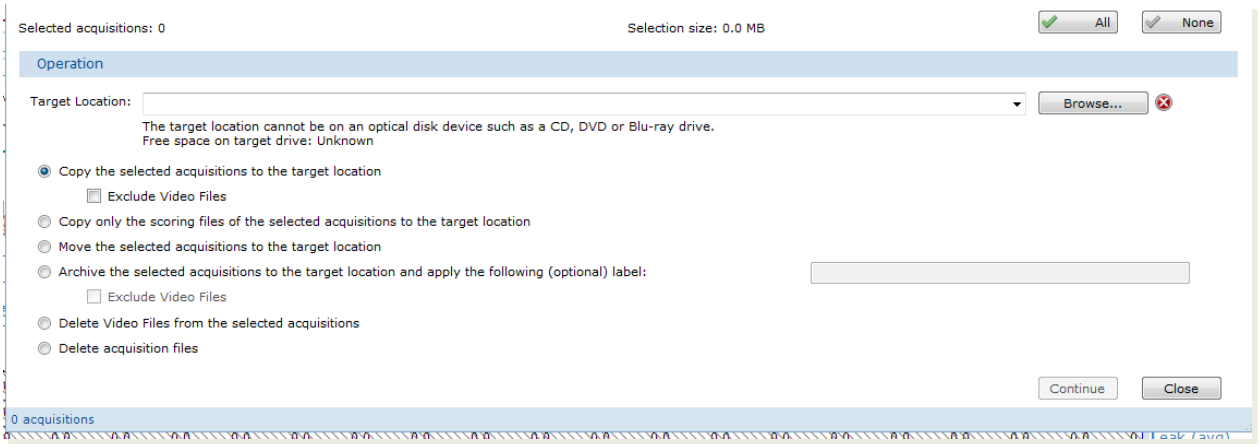
To Select a Copy or Move Option:

Copy the selected acquisitions to the target location: Puts a copy of the selected acquisitions in the target location and does not delete the original files. You can also choose to **Exclude Video Files** associated with the acquisition.

Copy only the scoring files of the selected acquisitions to the target location: Copies only the scoring files associated with the selected acquisitions, not the acquisition files.

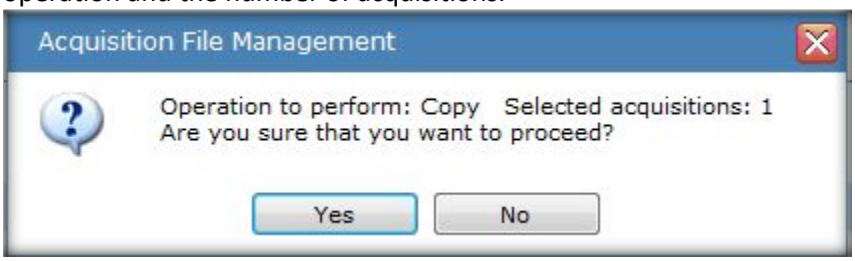


Move the selected acquisitions to the target location: Copies the selected acquisition files to the target location, then deletes the originals after the copy.

Archive the selected acquisitions to the target location and apply the following (optional) label: Copies the selected acquisition files to the target location, then deletes the originals after the copy. This function also adds a user-specified archive label and computer-generated archive date to that acquisition's record in the database. By default, an acquisition that has an archive label and date in the database does not appear when searching for acquisitions. You can also choose to **Exclude Video Files** associated with the acquisition.

Delete video files from the selected acquisitions: This option allows you to delete multiple video files at once.

Click **Continue** to perform the selected operation. A confirmation prompt is displayed showing the desired operation and the number of acquisitions.



Click **Yes** to continue.

A status window opens indicating the status of the operation for each acquisition.

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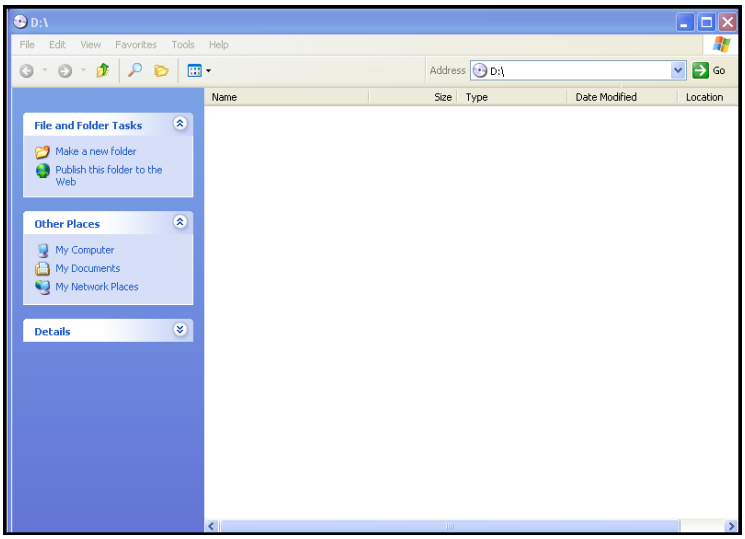
Using Microsoft Windows to Copy Acquisition Files to CD/DVD

A CD or DVD can be used to archive a single acquisition or a small set of acquisitions.

To copy acquisition files to CD or DVD:

1. Place a writable CD or DVD into your computer's recording drive. A drive window opens.

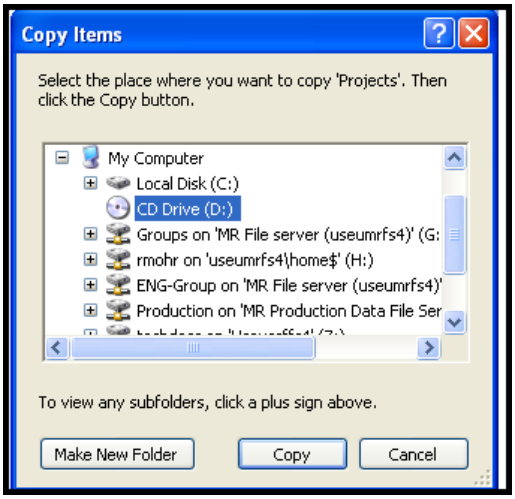
2. Highlight the **Open writable CD folder using Windows Explorer** option and click **OK**. A Windows Explorer window opens for the DVD and shows no contents in it.



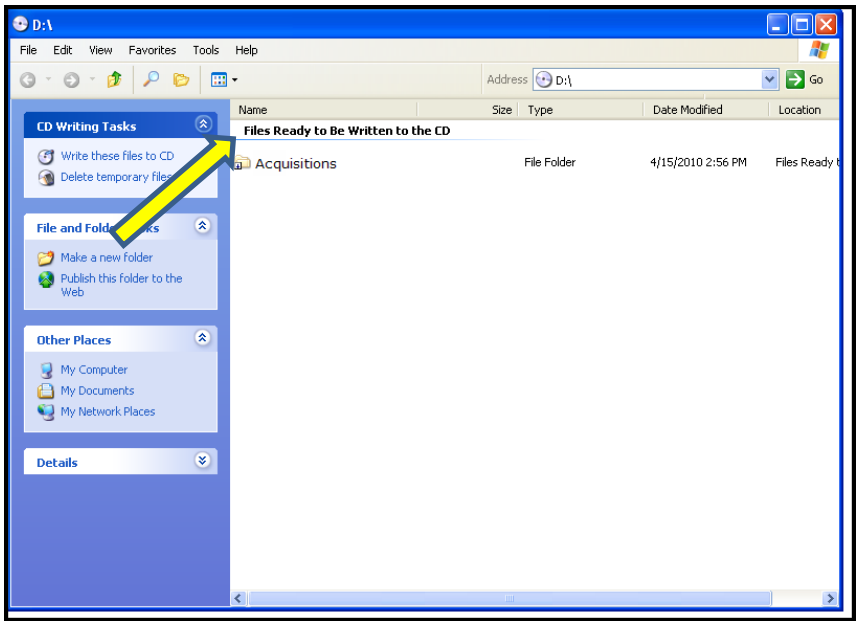
3. Open My Computer (click **Start > My Computer** > *select the hard drive containing the acquisition files to copy*). Alternatively, if you want to copy a single acquisition directly to CD/DVD, right-click on the acquisition in your start page and select the **Explorer Selections** option. This opens Microsoft Windows Explorer automatically with the acquisition folder pre-selected. A Windows Explorer window opens.

4. Click on the file or folders you want to copy to the DVD. To select more than one file hold down the CTRL key while you click the files you want.

5. Under Files and Folder Tasks, click **Copy this folder**. A Copy Items window opens.



6. Click on the recording drive (D in this example) and click **Copy**.
   The files/folders are copied to a temporary area where they are held before they are copied to the DVD. Verify that the files/folders you intended to copy appear under the **Files Ready to be Written to the CD** heading.



7. Under **CD Writing Tasks**, click **Write these files to CD**. Windows then displays the CD Writing Wizard.
8. Change the **CD name** if you wish and click **Next**.
9. Follow the instructions in the wizard.

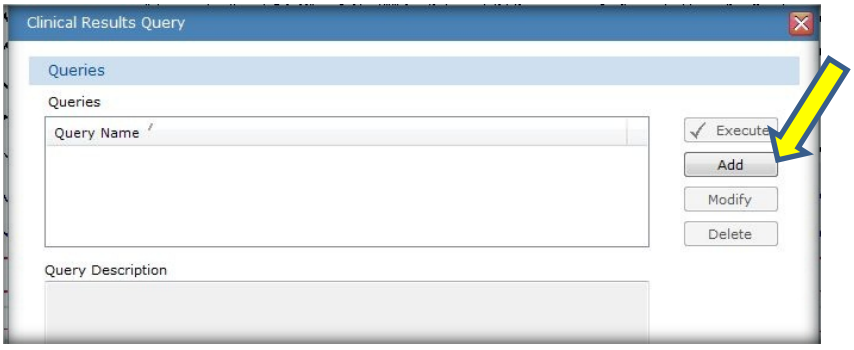
When the process is finished, the last page of the wizard displays a check box that enables you to create another CD like the one you just made.

Clinical Results Query

The Clinical Results Query window allows you to query the acquisition list in the database. You can create any number of custom queries using this tool.

To create a query:

1. Click the **Add** button. The Clinical Results Query Builder window is displayed.



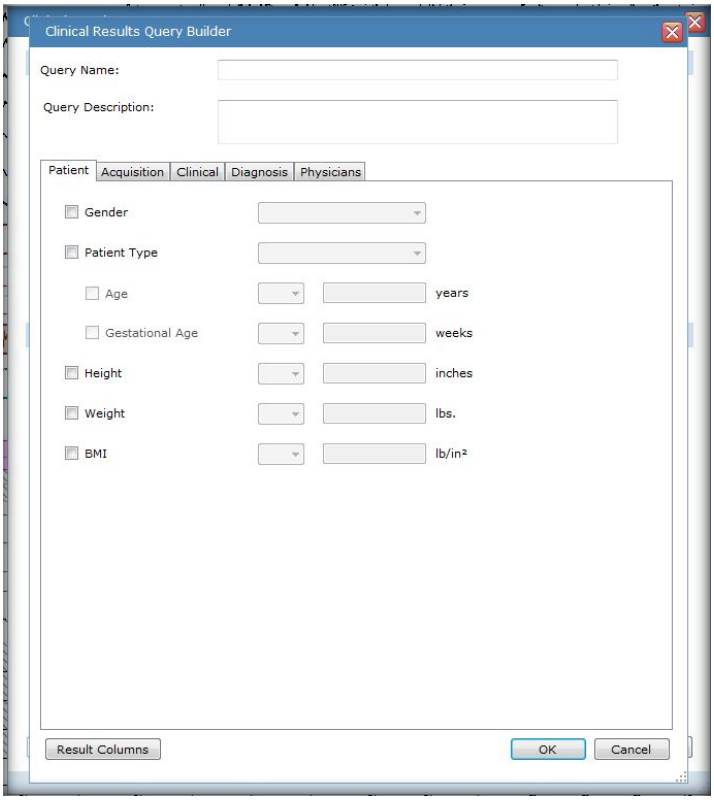
2. Enter the **Query Name** and the **Query Description**.
3. The window has several tabs that contain data items that can be used to filter the query. To add a filter item to the query, select the check box next to the item.

Once an item is checked, the query filter fields are activated:

- **Selection List** – A selection list allows you to select the data value to be used in the query from a list.

- **Operator Selector** – The operator selector includes the following operators: “=”, “!=”, “<”, “<=”, “>” and “>=” “Between”. Select the operator to be used in the query. If you selected “Between” you can then enter low and high range values separated by a space. For example, choose **Between**, then enter **10 20**, meaning between 10 and 20.

- **Text Entry Field** – Typically, there is a text field next to an Operator Selector. The text field is used to enter the value associated with the operator chosen. There are cases where a text field does not have an Operator Selector, but has a **Select** button. The Select button can be used to select an item to fill in the text field, or you can manually enter text into the field.



4. Once you have selected the query filter items, you can then specify the data (columns) to be included in the query results by clicking the **Result Columns** button. The Clinical Results Query Columns window is displayed.
5. Select the applicable data columns to include in the query results.
6. You can reorder the columns by selecting a column and clicking the **UP** and **Down** buttons to move the column in the list.
7. Click **OK** to close the Clinical Results Query.
8. Click **OK** again to save the query.

PHILIPS

To execute a defined query:

1. Select a query in the list of queries.
2. Click the **Execute** button.
3. All of the query conditions that have been selected are used to query the database. Any acquisition in the database that satisfies every query condition defined will be displayed in the Query Results area.
4. A column will appear for every query condition selected. The query list can be sorted by clicking on the applicable column heading.
5. If you want to save the query results to a CSV file, click the **Save Results** button.

To modify a query:

1. Select a query in the list of queries, and click the **Modify** button.
2. The Clinical Results Query Builder window is displayed.
3. Make any modifications to the query description, query filter items, and data (column) selection. Click **OK** to save the changes.

To delete a query:

1. Select a query in the list of queries.
2. Click the **Delete** button.

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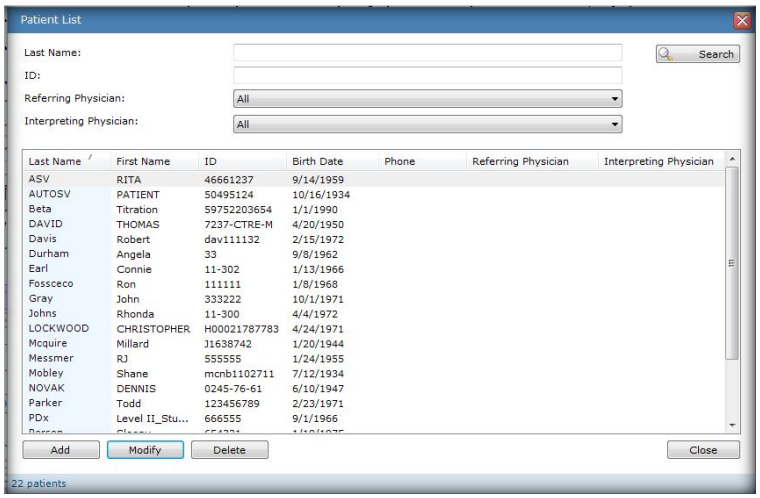
Patient List

The Patient List window allows you to search for, view, add, modify, and delete patients in the database. If the database is not available and you are working offline, this search is disabled.

- To access the Patient List, select **Tools > Patient List** from the main menu bar.
- The Patient List window opens.
- You can now perform any of the operations described below.



To Search for an Existing Patient:

1. Enter a full or partial name in the **Last Name** box.
2. Click the **Search** button to execute the search.
3. All patients matching the search criteria are displayed.

To Add a New Patient

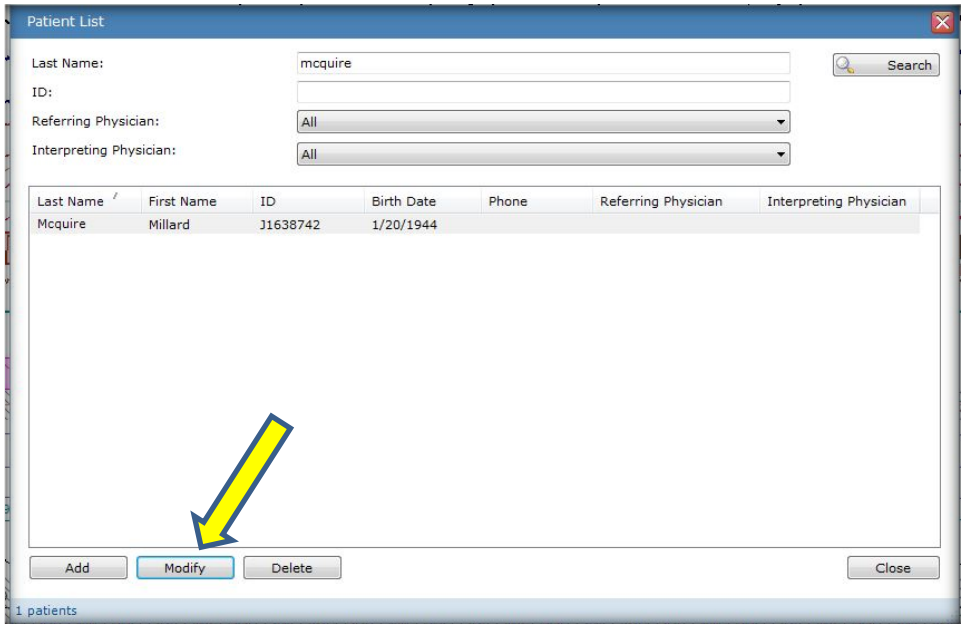
1. Click the **Add** button.
2. The Patient Information window opens.
3. Enter patient information in the spaces provided.

A referring and/or interpreting physician can be associated with the patient being added. Use the applicable tab to display the referring or interpreting physician window. An existing physician can be selected from a list or a new physician can be added to the database. Additionally, the physician can be disassociated from the patient by selecting **Clear**.

4. Click **OK** to save the patient information and close the window.

To Modify an Existing Patient's Information

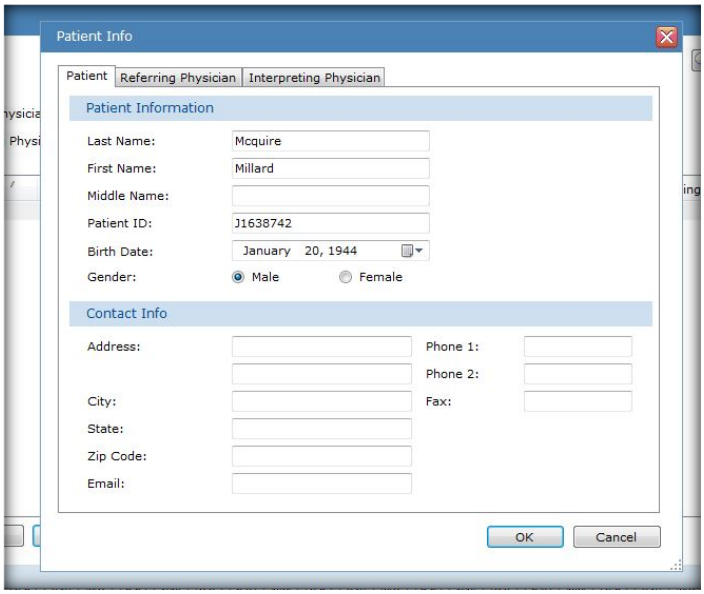
1. Perform a search to locate the patient.
2. Select the patient, and click the **Modify** button.
3. The Patient Information window opens.



4. Edit the patient information shown as needed.

A referring and/or interpreting physician can be modified or added for the patient. Use the applicable tab to display the referring or interpreting physician window. An existing physician can be selected from a list or a new physician can be added to the database. Additionally, the physician can be disassociated from the patient by selecting **Clear**.

5. Click **OK** to save patient information and close the window.

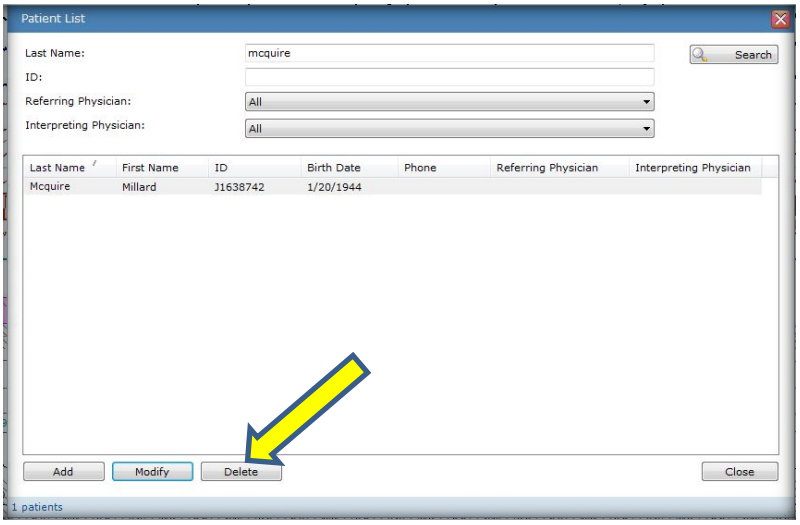


PHILIPS

Delete an Existing Patient

[* A patient can be deleted only after the study and the physician has been deleted.]

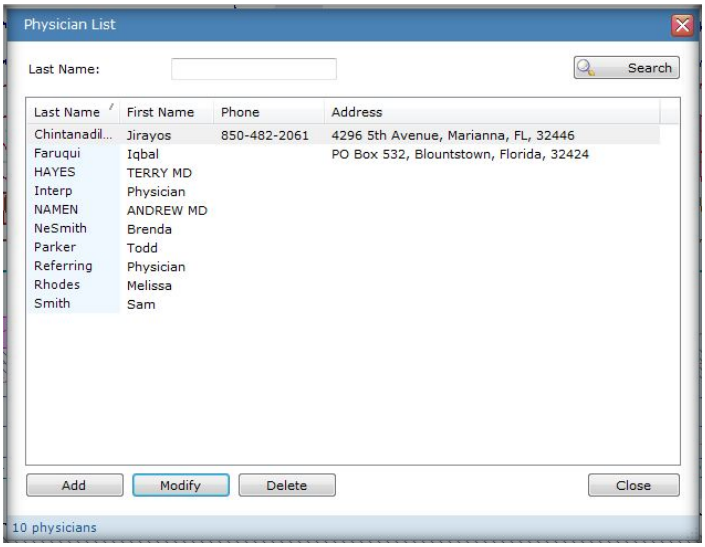
1. Perform a search to locate the patient to be deleted.
2. Select the patient to delete, and click the **Delete** button.
3. A confirmation prompt is displayed.
4. Click **Yes** to continue.
5. The patient is removed from the database, as long as the study itself has been deleted.



Physician List

The Physician List window allows you to search for, view, add, modify, and delete physicians in the database. If the database is not available and you are working offline, this search is disabled. The physician information is used for both referring and interpreting physicians.

- To access the Physician List, select **Tools > Physician List** from the main menu bar.
- The Physician List window opens.



You can now perform any of the following operations …

PHILIPS

Search for an Existing Physician:

1. Enter a full or partial name in the **Last Name** box.
2. Click the **Search** button to execute the search.
3. All physicians matching the search criteria are displayed.

Add a New Physician:

1. Click the **Add** button.
2. The Physician Information window opens.
3. Enter physician information in the spaces provided.
4. Click **OK** to save the physician information and close the window.

Modify an Existing Physician's Information:

1. (Optional) Perform a search to locate the physician.
2. Select the physician, and click the **Modify** button. The Physician Information window opens.
3. Edit the physician information shown as needed and click **OK**.
4. The changes are saved and the window is closed.

Delete an Existing Physician:

1. (Optional) Perform a search to locate the physician to be deleted.
2. Select the physician to delete, and click the **Delete** button. A confirmation prompt is displayed.
3. Click **Yes** to continue.
4. The physician is removed from the database, as long as there are no studies associated with that physician.

Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

PHILIPS

G3 Training Module

PHILIPS
RESPIRONICS
Sleepware G3
Generating Reports
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PHILIPS

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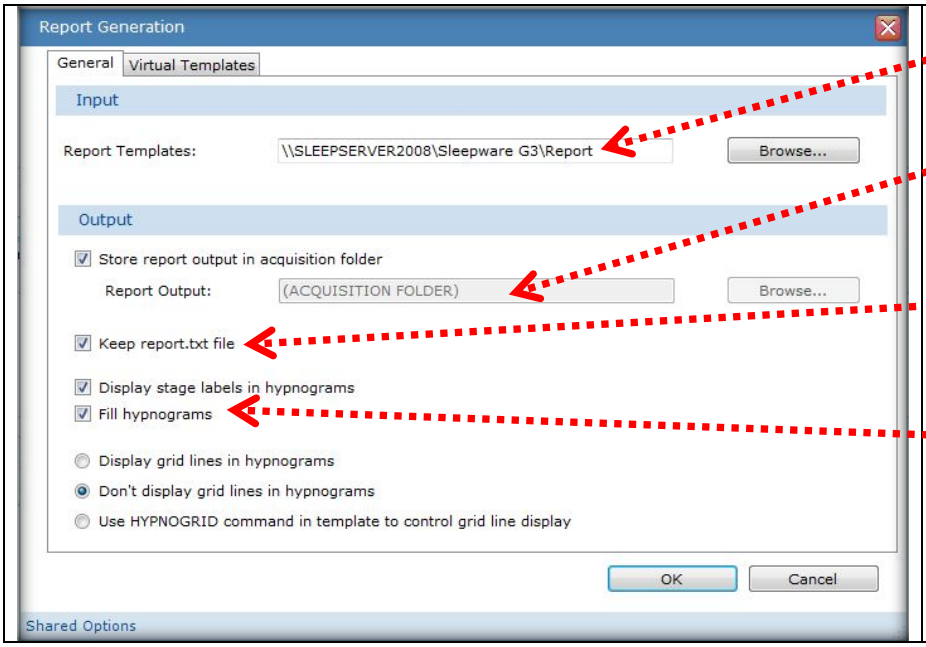
PHILIPS

Report Generation

The Report Generation window allows you to configure the folders for storing reports and templates.

The **General** tab contains options related to the folder for general reports and several visual options regarding the appearance of hypnograms.



This is where your templates are located.

This is where your generated templates are located.

Check this box to store and view all of the generated report codes and values.

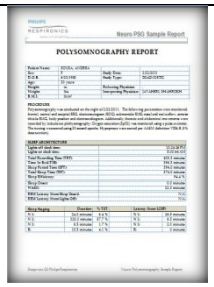
Check this box to fill in the hypnogram squares on the report.

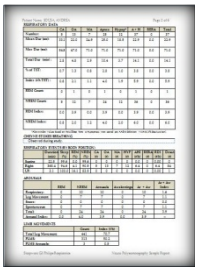
The Sleepware report generation feature utilizes report templates that are stored in Rich Text Format (RTF).

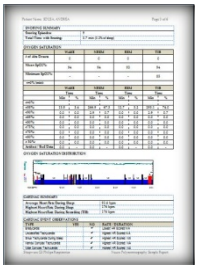
There are several report types:

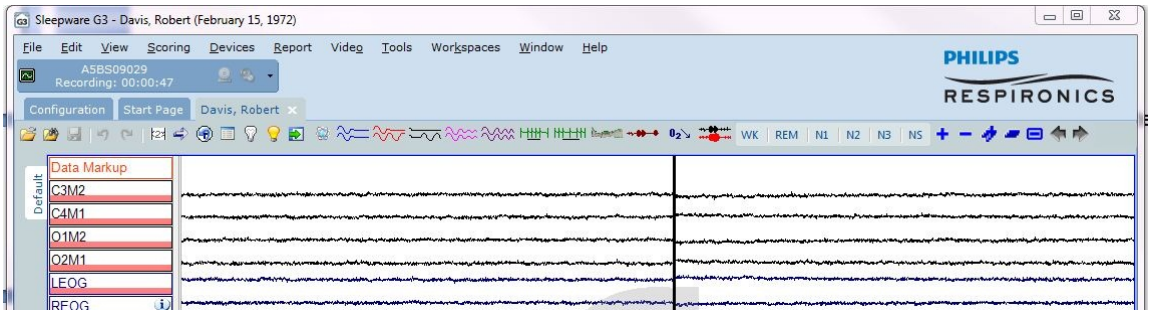
1. PSG (Diagnostic, Therapeutic, Split)
2. MSLT
3. Inter-Scorer

Reports can be generated for any open acquisition.



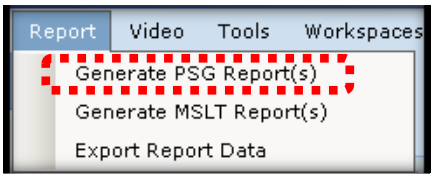






PHILIPS

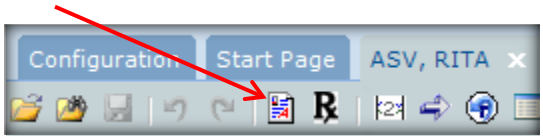
Generating PSG Reports



Use this window to generate **diagnostic, therapeutic, split-night and interpretive reports**. A report file (in .RTF format) is generated and can be viewed and/or printed.

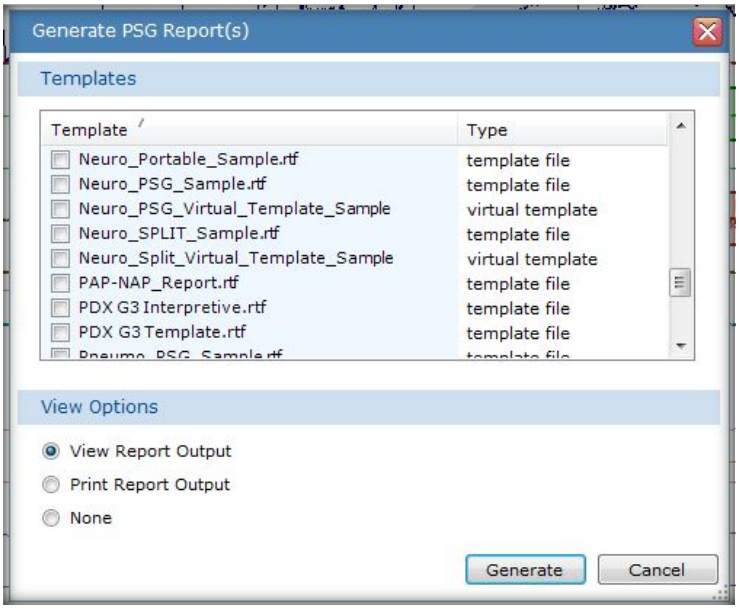
*When generating a titration template, remember to select the Therapy Device Mode under the EDIT tab.

<u>Follow these steps to generate reports:</u>
Select **Report > Generate PSG Report(s)** from the main menu, or click on the 'Generate PSG Report(s)' icon. The Generate PSG Report(s) window opens.

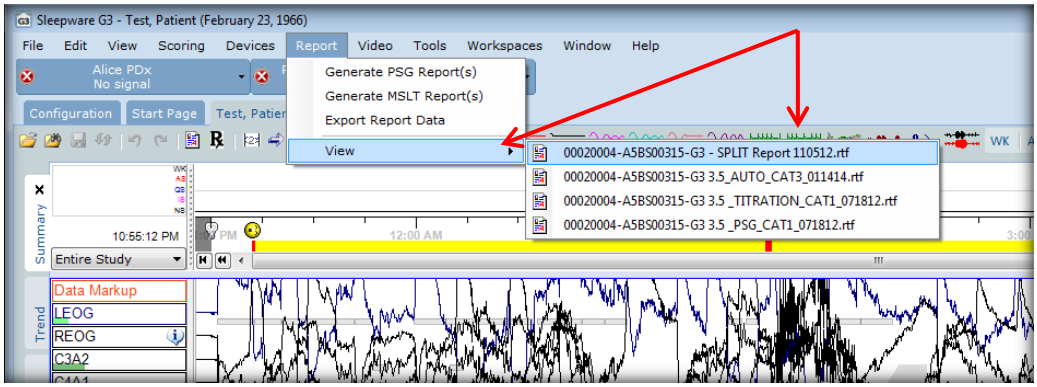


Select one or more check boxes associated with the appropriate template file.

**The templates available are those found in the designated report templates directory specified in the Report Generation window.



You can now view a generated report while viewing the raw data.

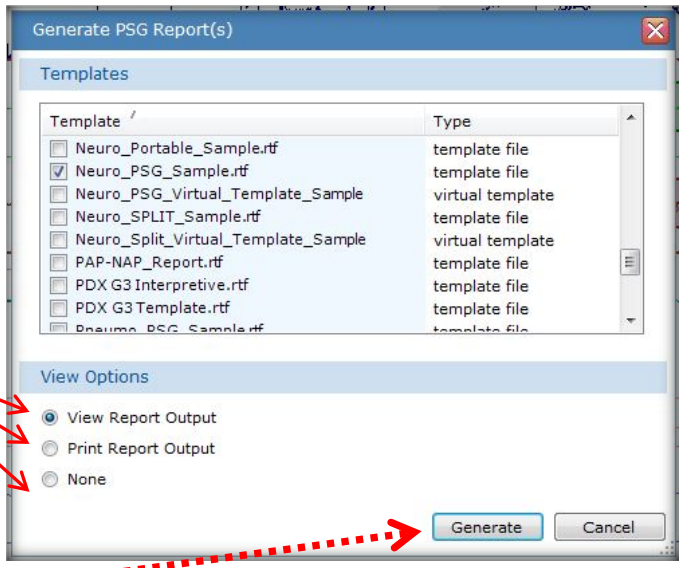


Select a **View Option**:

View Report Output: A report file is created for each template selected and an instance of MS Word is automatically launched for each report.

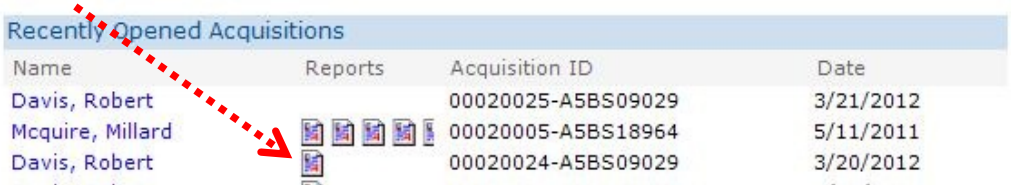
Print Report Output: A report file is created for each template selected and automatically printed to the computer's default printer.

None: A report file is only created.



Click the Generate **button to create the report.**

The reports are generated and saved by default in the acquisition folder.



PHILIPS

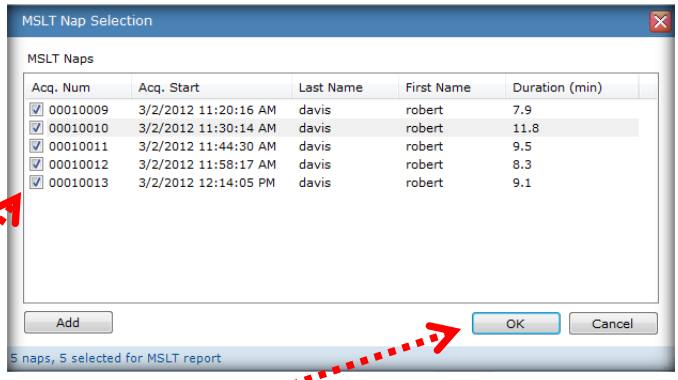
Generating MSLT Reports

When generating an MSLT report, you can select one to five acquisitions to include in the report where each acquisition represents a particular nap for that patient.

Follow these steps to generate an MSLT report:

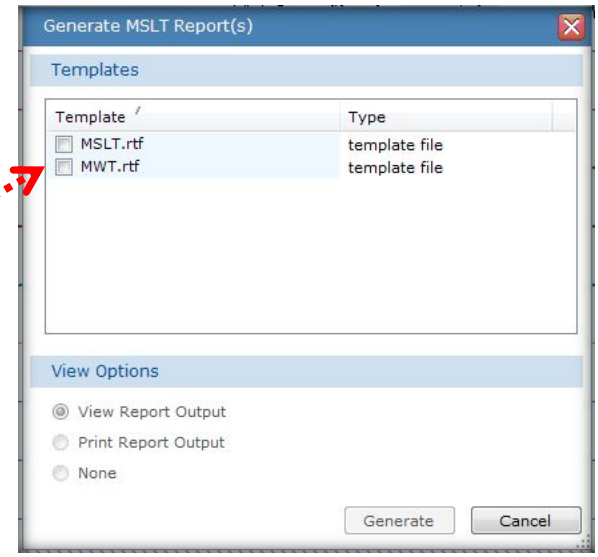
1. Select **Report->Generate MSLT Report(s)** from the main menu. The MSLT Nap Selection window opens. A list of acquisitions is displayed for that patient according to a set of rules.

2. Select the acquisitions to include in the MSLT report. If desired you can add other acquisitions not displayed in the list by clicking the **Add** button. The Open Acquisition window opens where you can manually add another acquisition to the list.



3. Click **OK** once you have selected all the naps. The Generate MSLT Report(s)

4. Select one or more check boxes associated with the appropriate template file. The templates available are those found in the designated report templates directory specified in the Report Generation window.



PHILIPS

Generating a Prescription

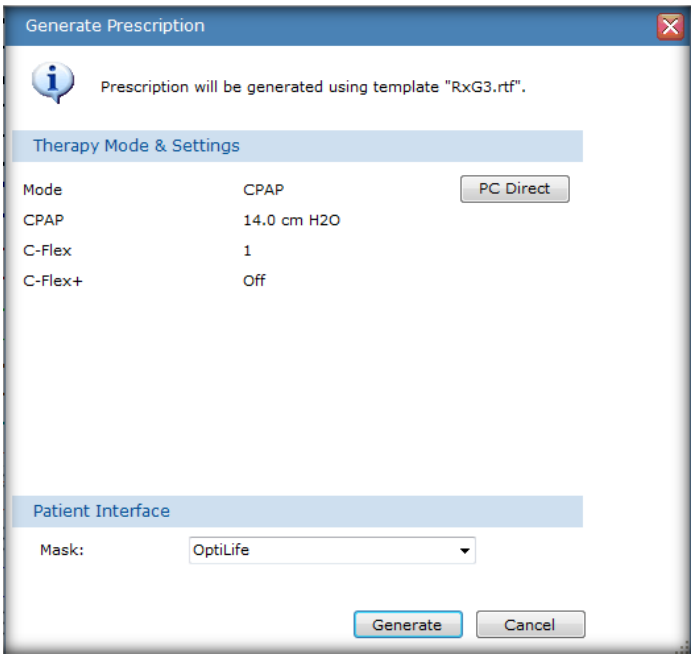
Sleepware G3 can generate printed prescriptions for therapy devices and masks. As with other reports within Sleepware, the prescription is based on a user-customizable template. Since nearly all data normally available to standard PSG reports can also be included in the prescription, very little data entry is required.

If a prescription exists for an acquisition, a corresponding **Rx** icon is displayed in the Reports column on the Recently Opened Acquisitions and My Acquisitions list.

The prescription function is recommended to be used in conjunction with the Philips Respironics PC Direct application. PC Direct generates a log file of the settings changes throughout a titration. This log generates an entry every five minutes. Therefore, settings changes that persist less than five minutes are not recorded in the log.

PC Direct is launched directly from Sleepware G3 via an option on an Alice 5/LE/6 device menu. If PC Direct is already running prior to the start of an acquisition, Sleepware G3 will automatically restart it in order to provide the acquisition-specific information to PC Direct needed for logging purposes.

If PC Direct is not utilized or for some reason the PC Direct log is not available, the prescription function is still operational with some limitations.



<u>To generate a prescription</u>:

1. Select **File > Generate Prescription** from the main menu or click on the **Rx** icon on the main toolbar.
   The Generate Prescription window is displayed with all available prescription template files, if there is more than one file available.

   If only one template exists, the list of templates is not displayed.

2. Select the template file you want to base the prescription on.

Notes: By default, the last set of valid therapy settings that are present in the acquisition's PC Direct log file are displayed. You can click the **PC Direct Log** button to view the log and select a different set of settings. If the acquisition does not have a PC Direct log file, or the log file is invalid, a message is displayed and the **PC Direct Log** button is disabled. You will have to manually enter the therapy settings.

The Therapy Summary in the PC Direct Log file contains the following information:

Mode: The mode that was in effect on the therapy device.
Start Time: The time at which the therapy mode and its associated settings went into effect on the therapy device.
Duration: The period of time the therapy mode and its associated settings were in effect on the therapy device.
Change Type: The type of change between an item and the previous item.
The Therapy Summary does not show every entry that is logged into the PC Direct log file. It only shows entries that reflect a change in the therapy mode/settings and connection status.

3. Select a mask from the **Mask** drop-down list. If the mask you want is not available in the list, you can type it in the space provided and it will become part of the list for subsequent selections.
4. Click **Generate** to generate the prescription and view it in Microsoft Word. From there, you can print the prescription.

IMPORTANT!

Prescriptions can only be generated when an acquisition is opened in PSG mode and by users with the "Generate Prescription" privilege.

Prescription files are associated with their corresponding acquisitions.

PHILIPS

Prescription for Therapy Device

Sleep Center / Provider Name:		Phone:	
		Fax:	

Rx (CPAP/Bi-Level Therapy)

Patient Name:	Test, Patient		Date:	8/14/2012
Address:			Phone 1:	
Address:			Phone 2:	
City			Fax:	
State:			Zip:	
Ordering Physician:	,	**License#:**	**UPIN/NPI#:**	
Address:			Phone 1:	
Address:			Phone 2:	
City:			Fax:	
State:			Zip:	

PSG Date: 8/14/2012

AHI (TST): 0.0 RDI (TST): 0.0

	Code	Description
Diagnosis 1		
Diagnosis 2		
Diagnosis 3		
Diagnosis 4		

THERAPY SETTINGS:

Mode ..... CPAP
CPAP ..... 14.0 cm H2O
C-Flex 1
C-Flex+ ..... Off

ADDITIONAL REQUIREMENTS:

Humidification:	No	Download Compliance Reporting:	Yes

PATIENT INTERFACE:

Masks or Interface:	OptiLife	Size:	Med-Large

STATEMENT OF MEDICAL NECESSITY:

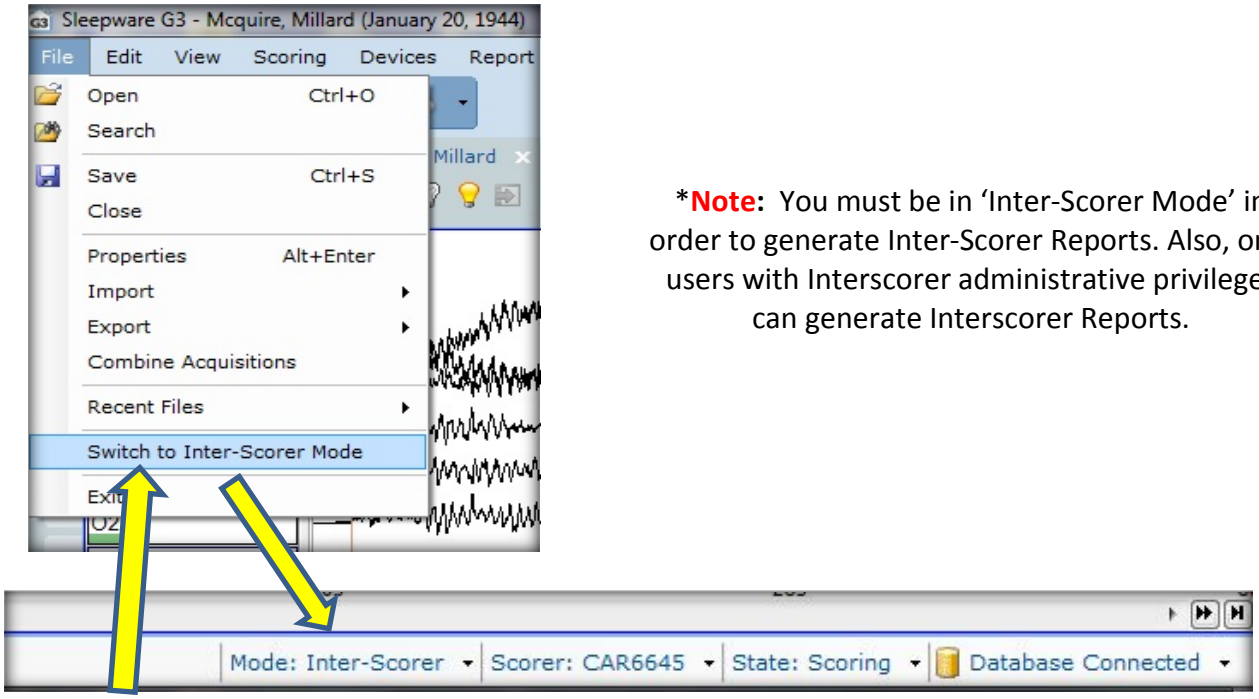
The above patient has undergone polysomnographic evaluation. This evaluation has confirmed the diagnosis of Sleep Apnea/Hypopnea. Nasal CPAP/Bi-level PAP is medically necessary and provides the most effective treatment.

Ordering Physician Signature:		Date:	

DISPENSE AS WRITTEN - NO SUBSTITUTIONS

PHILIPS

Generating Inter-Scorer Reports



*__Note__: You must be in 'Inter-Scorer Mode' in order to generate Inter-Scorer Reports. Also, only users with Interscorer administrative privileges can generate Interscorer Reports.

Follow these steps to generate an Inter-scorer report:

Select **Report > Generate Inter-Scorer Report(s)** from the main menu. The Generate Inter-Scorer Report(s) window is displayed. In the Templates group, select one or more check boxes associated with the appropriate template file.

The **1_Scorer_vs_Master.rtf** option compares one scorer against the master score, and the **N_Scorer_vs_Master.rtf** option compares multiple scorers against the master score.

In the Scorers group, the **Master Scorer** shown is the master scorer who was selected for this acquisition.

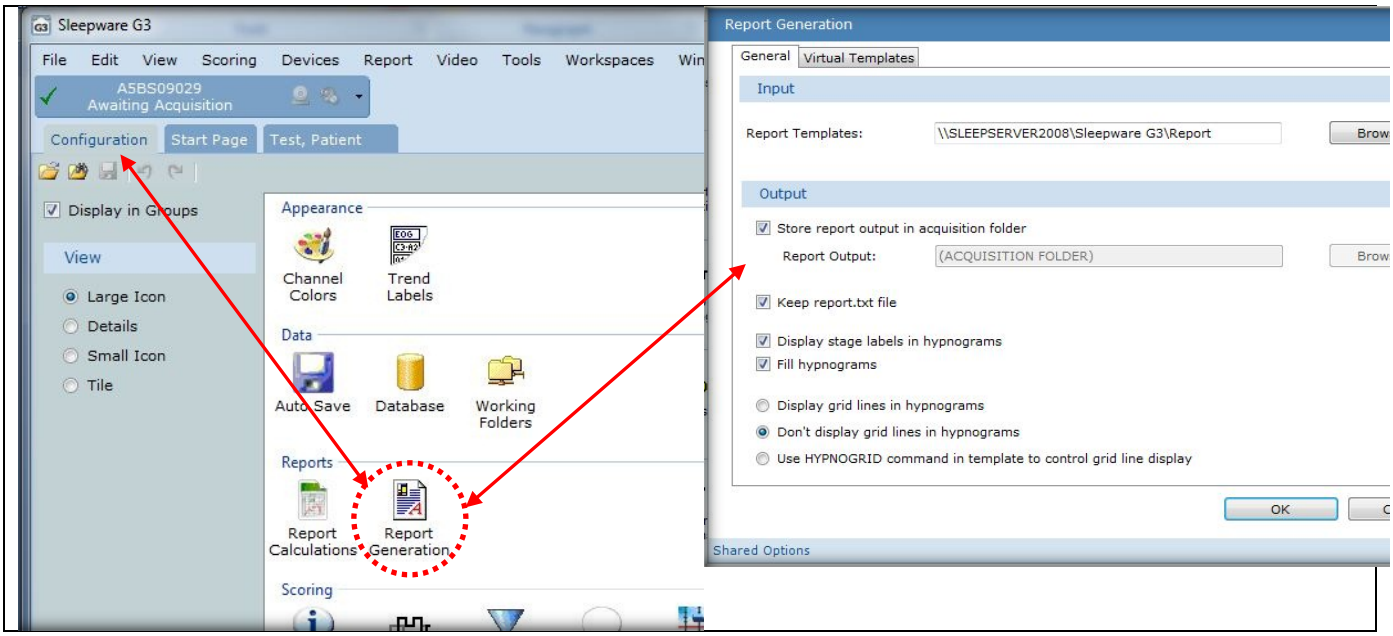
Select one or more check boxes associated with the applicable scorers to be included in the report. The scorers listed are associated with this acquisition. Each entry indicates the last known state for that scorer and the date last modified.

PHILIPS

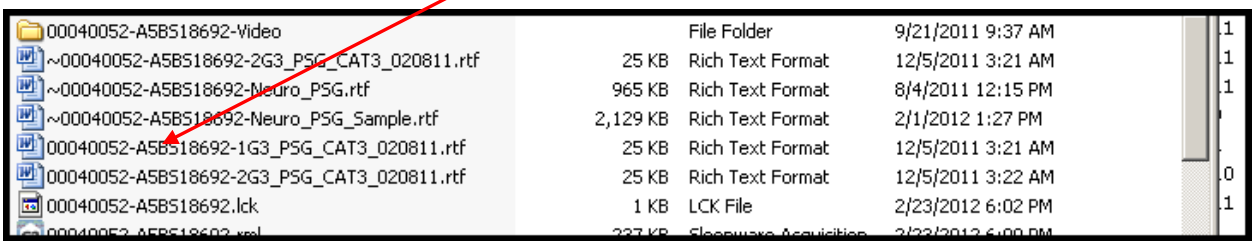
Saving a Report

When you generate a report, the report output will be saved with the acquisition in the acquisition folder by default. Optionally, you may specify another folder.

See the Report Generation window (under the Configuration tab) for additional details.



* When a report is generated, Sleepware automatically assigns a name to the report file using the following convention: *Acquisition_ID-Template_Name.RTF*

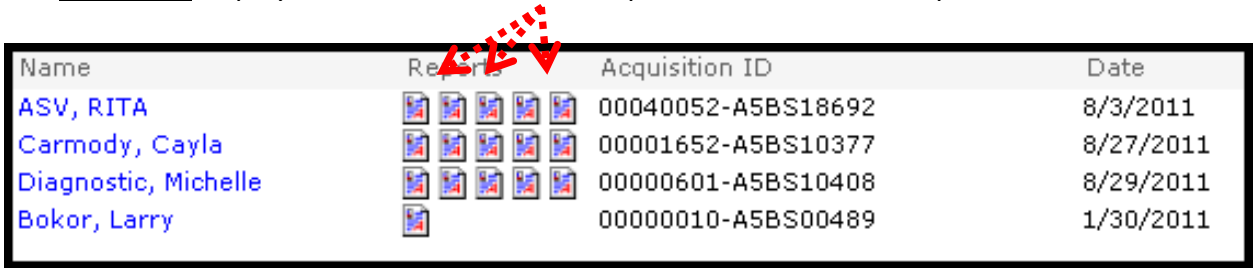


Each time you generate a report for the same acquisition with the same template, the existing file will be overwritten.

You can use the Save-As feature in Microsoft Word to save a report to another name or location if desired.

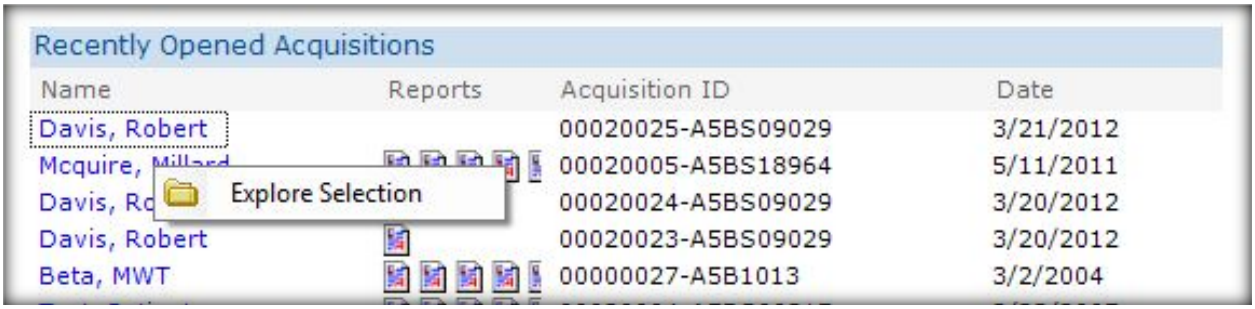
Note that a backup version of the overwritten file is preserved and the file name is preceded by a **~** symbol.

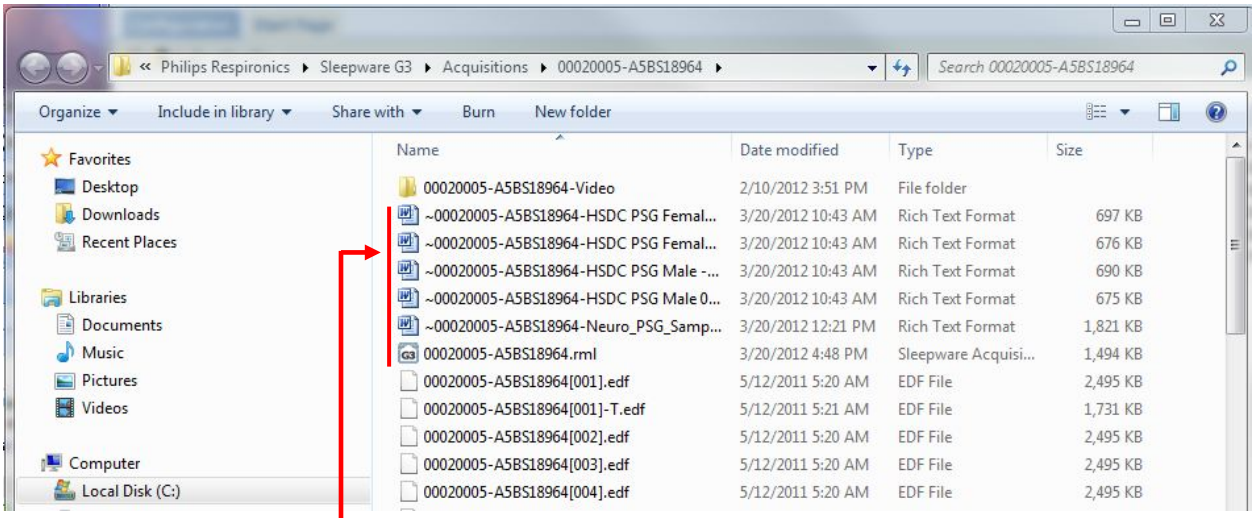
The Start Page display shows an icon for each report stored with the acquisition.



Deleting a Report

Locate the acquisition from the Start Page tab. Right click on the patient name and click EXPLORE SELECTION.





EXPLORE SELECTION takes you to the Acquisitions folder. The reports are here as Rich Text Format (.rtf) documents.

Select the report(s) you want to delete and press the DELETE key.

Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

Sleepware G3

Portable Device Manager:

Portable Device Manager Tool

& Patient and Device Centric Start Page

innovation you

PHILIPS

Portable Device Manager (PDM)

Portable Device Manager is a feature, released with Sleepware G3 version 3.9.0, that allows you to manage your fleet of Alice NightOne and Alice PDx portable sleep testing devices, as well as manage your patients through the sleep testing cycle by using the ***Portable Device Manager tool*** and ***Patient and Device Dashboard Start Page.***

Benefit

PDM helps create efficiencies by allowing you to track patients and devices during the portable test workflow using a dashboard – knowing exactly where they are in the workflow process. PDM also allows you to monitor device history, utilization, and statistics to help you manage your fleet – knowing which device is available, which is out to a patient, mean and median times at various states of the workflow.

Functionality

- Allows for management of a lab's entire fleet of portable devices.
- Creates a workflow paradigm to track device states and study states as a patient goes through a home sleep test such as:
  - Configure Device
  - Dispatched - Delivered
  - Patient Received Device
  - Acquisition Imported/Scored/Interpreted
  - Device cleaning/Visual inspection (custom states)
- Allows ability to analyze device utilization, cleaning & maintenance, and time through workflow.

PHILIPS

Objectives

Portable Device Manager (PDM) tool and Start Page Dashboard

- Learn how to configure “Workflow” settings for PDM on the Configuration Page.
- Learn how to access the Portable Device Management Tool to add devices.
- Learn how to access the Patient and Devices Start Page Dashboards.
- Learn how to toggle between the Acquisition List Start Page and the Patient and Devices Start Page Dashboards.
- Learn how to navigate the Dashboards to view and manage Patient Workflow, device states and device availability.
- Learn how to change patient or device status on the Dashboards to match current workflow action.
- Learn now to navigate the Portable Device Management tool to add, modify and delete devices, and check the history and statistics of devices in your fleet.

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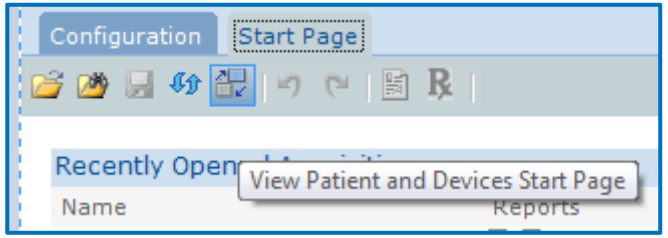
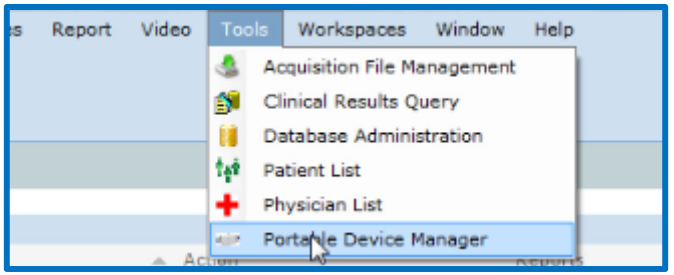
Portable Device Manager Tools and Start Page Functions

Patient and Device Workflow Start Page Dashboard



- The *device and patient Start Page dashboards* allow you to track and manage patients through the home sleep test cycle.
- The *device and patient Start Page dashboards* allow you to track your fleet of Alice NightOne and Alice PDx devices.

Tools > Portable Device Manager



- The *portable device manager tool* allows you to add new devices, modify and delete existing devices and search for, filter, and sort devices from the list.
- The *portable device manager tool* allows you to modify device statuses.
- The *portable device manager tool* allows you to view the history and usage statistics of one, several, or all devices in the fleet to optimize utilization.

PHILIPS

Portable Device Manager
The settings on the Configuration Page

PHILIPS

Configuration Page Workflow Settings

The Sleepware G3 Configuration Page now includes a Workflow section. There are 3 icons there to consider for PDM settings.

Patient Workflow: Allows you to set a threshold for number of days anticipated for the portable sleep testing cycle for all patients; portable and in-lab acquisitions.

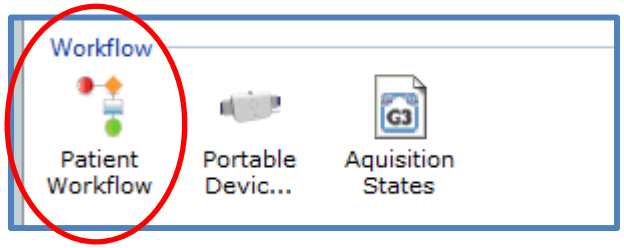
Portable Device States: Allows you to configure usage cycle and non-usage cycle device states.

Acquisition States: Allows you to manage the state of an acquisition, such as New Acquisition, Scored, Verified, or Complete.

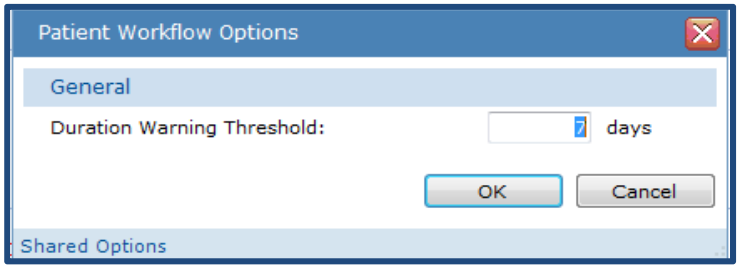
*Acquisition States already existed in Sleepware G3. Their position on the configuration page was moved to the workflow section with release of v 3.9.0.

PHILIPS

Patient Workflow Setting

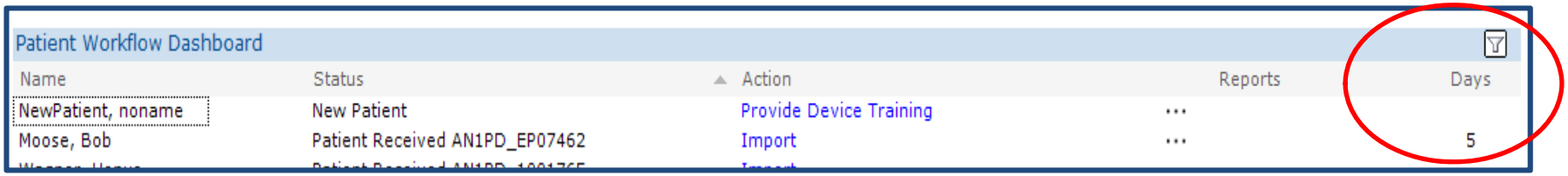


The Patient Workflow setting allows you to set a **Duration Warning Threshold** for the workflow cycle. When the number of days that a patient has been in the workflow exceeds the Duration Warning Threshold, the number is displayed in **red** on the patient dashboard. This setting applies to portable testing and full-PSG studies. The number of days in the workflow appears in the "Days" column on the dashboard.



For portable testing, the days count starts at the time the device is configured for the patient, i.e. If a device is configured at 11:20 am on Tuesday, this automatically starts the cycle at 1 day. The following day, exactly 24 hours later - on Wednesday at 11:20 a.m., the days count goes to 2.

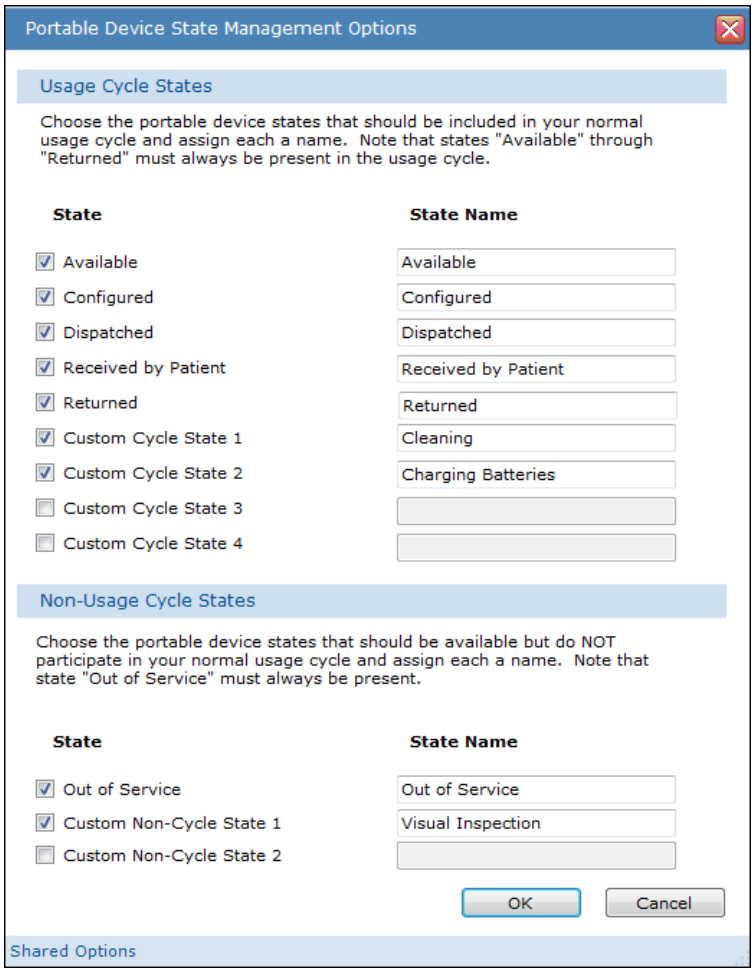
For full PSG, the workflow starts from the day the study is acquired and newly imported into Sleepware G3.



PHILIPS

Portable Device State Management Options

This setting allows you to define the states that a portable device can be in. There are Usage and Non-Usage states. By default, Available, Configured, Dispatched, Received by Patient, and Returned are always configured for usage and Out of Service is always configured for non-usage.



For usage states, you can add 4 additional custom states. To add them select a check box on the left of a custom cycle field, and then type the relevant text. Usage states are typically states such as cleaning the device and/or charging or changing batteries that would be part of a procedure between each test.

For non-usage states, Out of Service is the default state. You can add 2 additional custom states. Non-usage states are typically states such as visual inspection or you could also record device failures.

*(the State Name given can be edited to suit user preference).

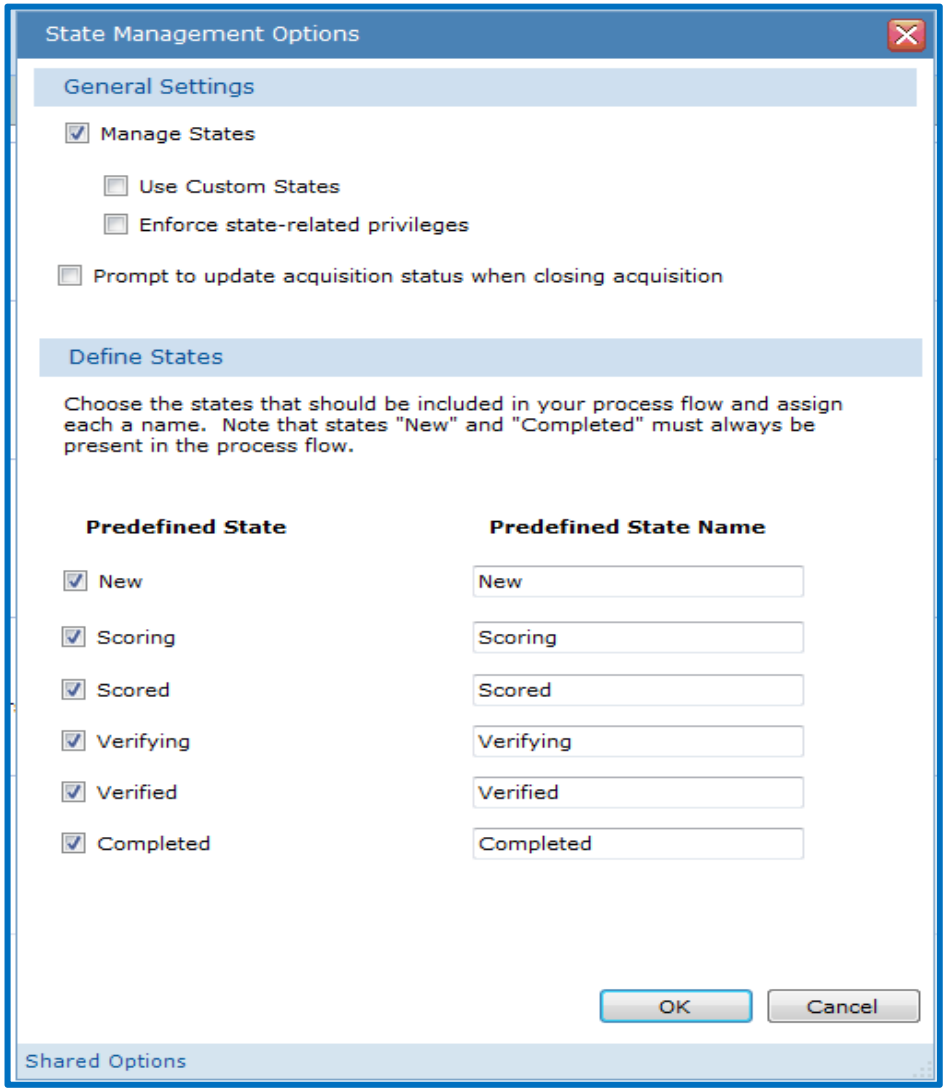
PHILIPS

State Management Options

The State Management window allows you manage the *states* assigned to acquisitions such as scoring, scored, verifying and verified. States allow acquisitions to be tracked as they progress through the workflow. **For the Patient Workflow Dashboard to work efficiently, Manage States must be enabled. It will be necessary to use the Completed state to remove patients from the dashboard once their cycles are completed.**

These states can be easily changed from within a patient record **and** from the portable device dashboard. Examples of this will be shown when the patient and device start page dashboard is reviewed.

You can deselect states from this list if you do not want to use them as part of the workflow. New and Completed **must** remain. The next few slides show examples of how this is applied.

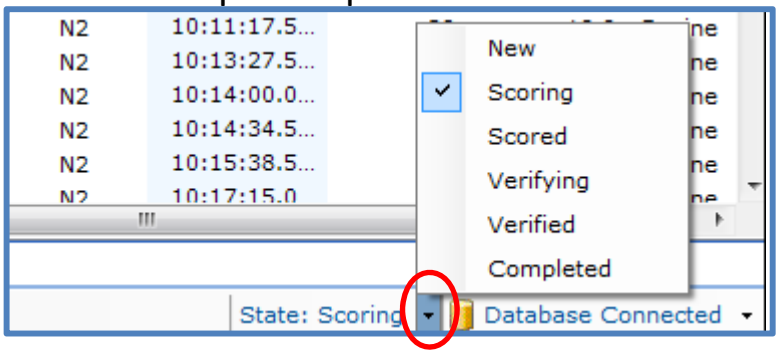


PHILIPS

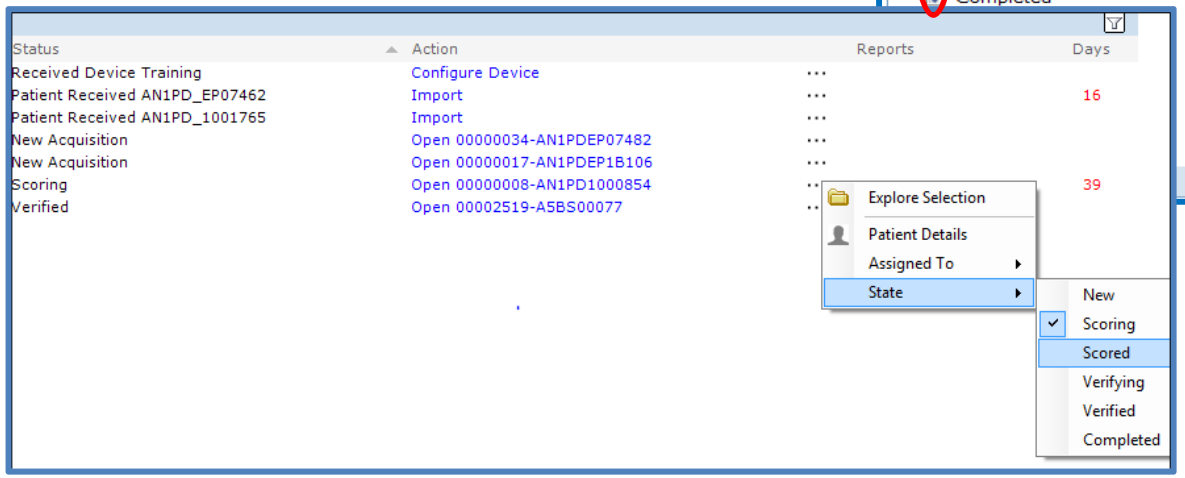
State Management Options

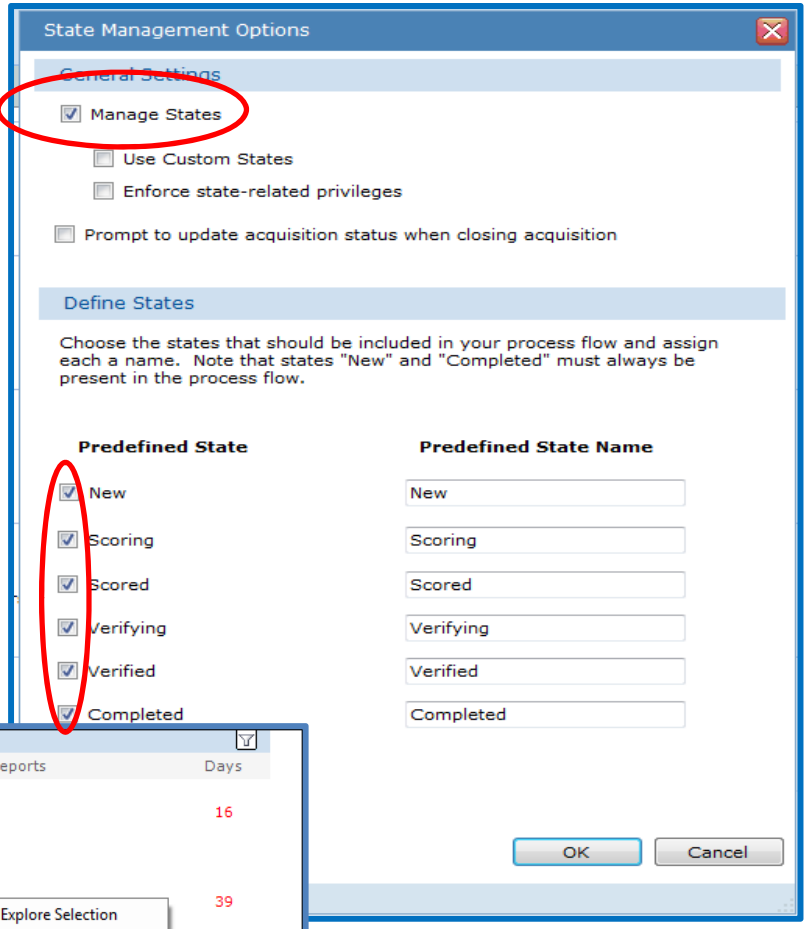
With all Predefined States in Use:

From within an open acquisition:



From the patient-centric workflow dashboard:

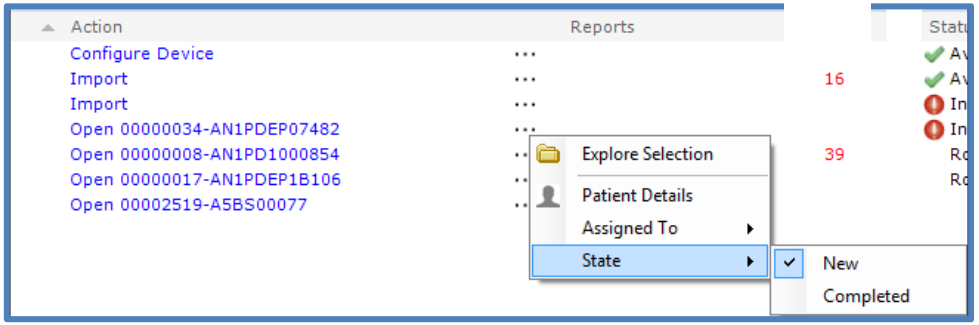




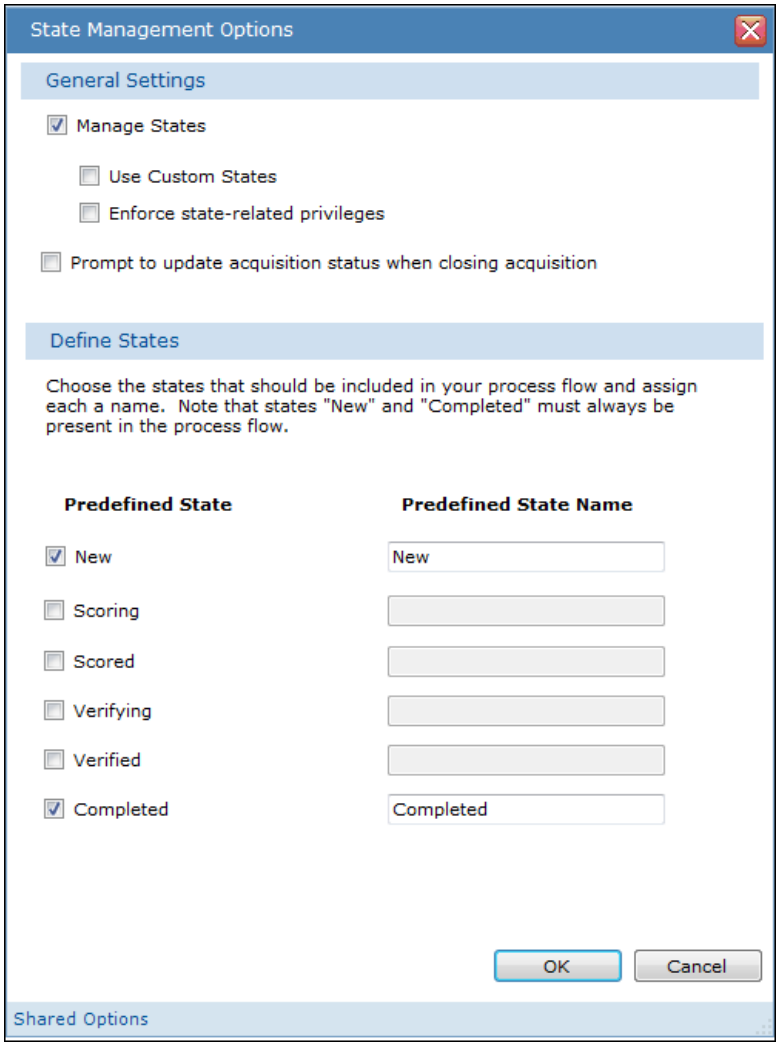
PHILIPS

State Management Options

You can deselect states from this list if you do not want to use them as part of the workflow. New and Completed **must** remain, at a minimum, if you intend to use the Patient and Device Workflow Dashboard.



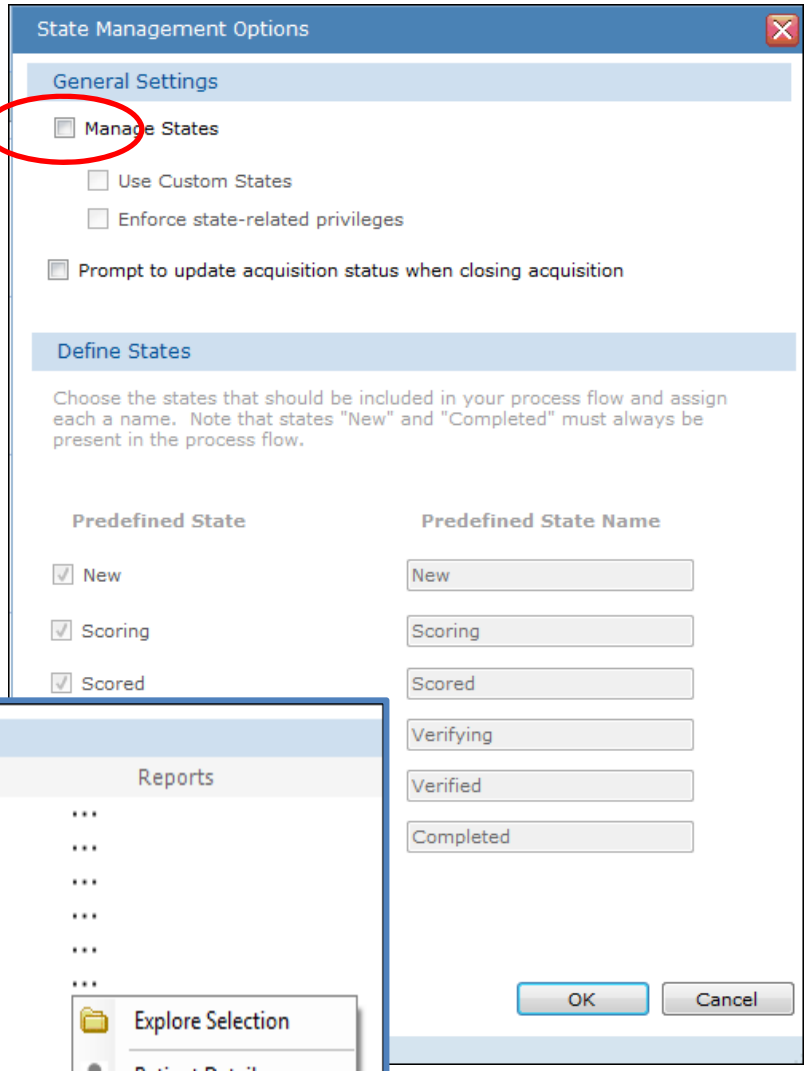
<u>It will be necessary to use the Completed state to remove patients from the dashboard once their cycles are completed</u>.

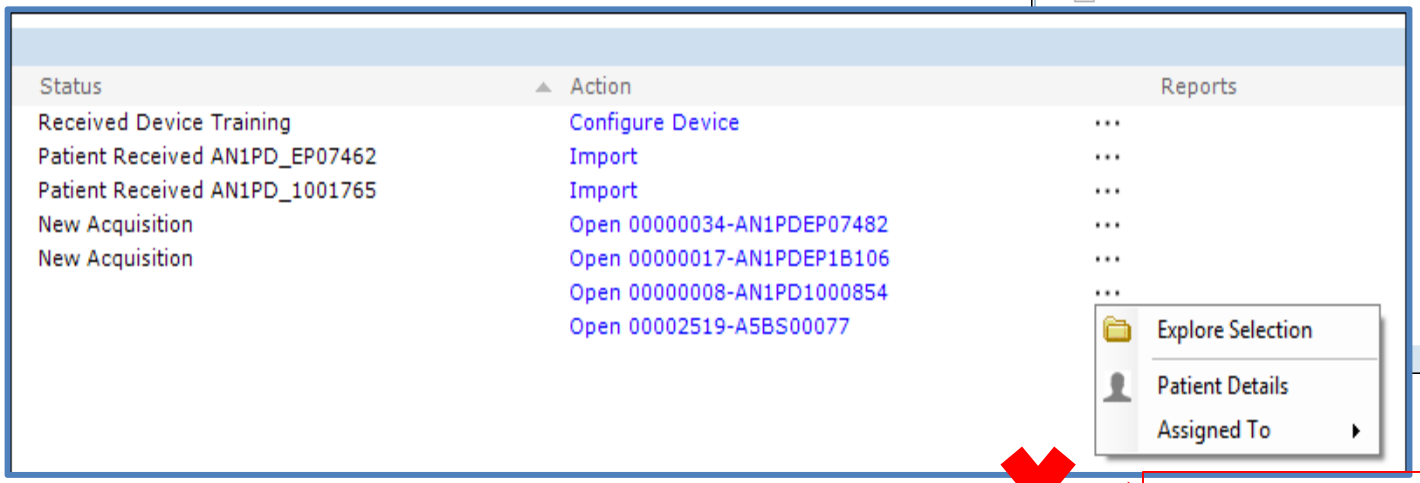


PHILIPS

State Management Options with Patient and Device Workflow Dashboard

If a Sleepware G3 user wants to the Patient and Device Centric Start Page Dashboard to track patient workflow, state management must be enabled with ‘New’ and ‘Completed’ as the predefined states. *If State Management is deselected, there is no way to mark an imported study as completed to remove it from the dashboard*.





Changing state NOT available

PHILIPS

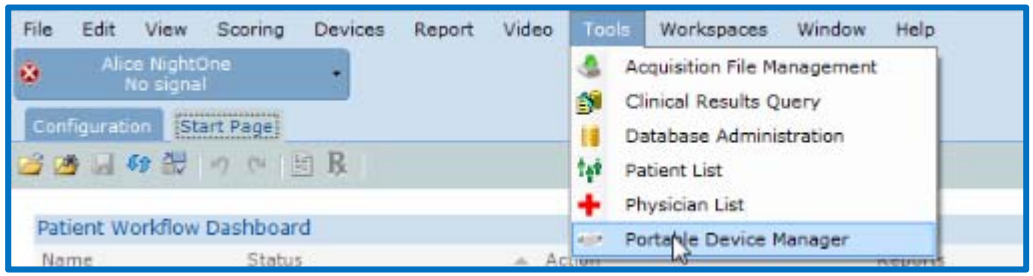
Portable Device Manager

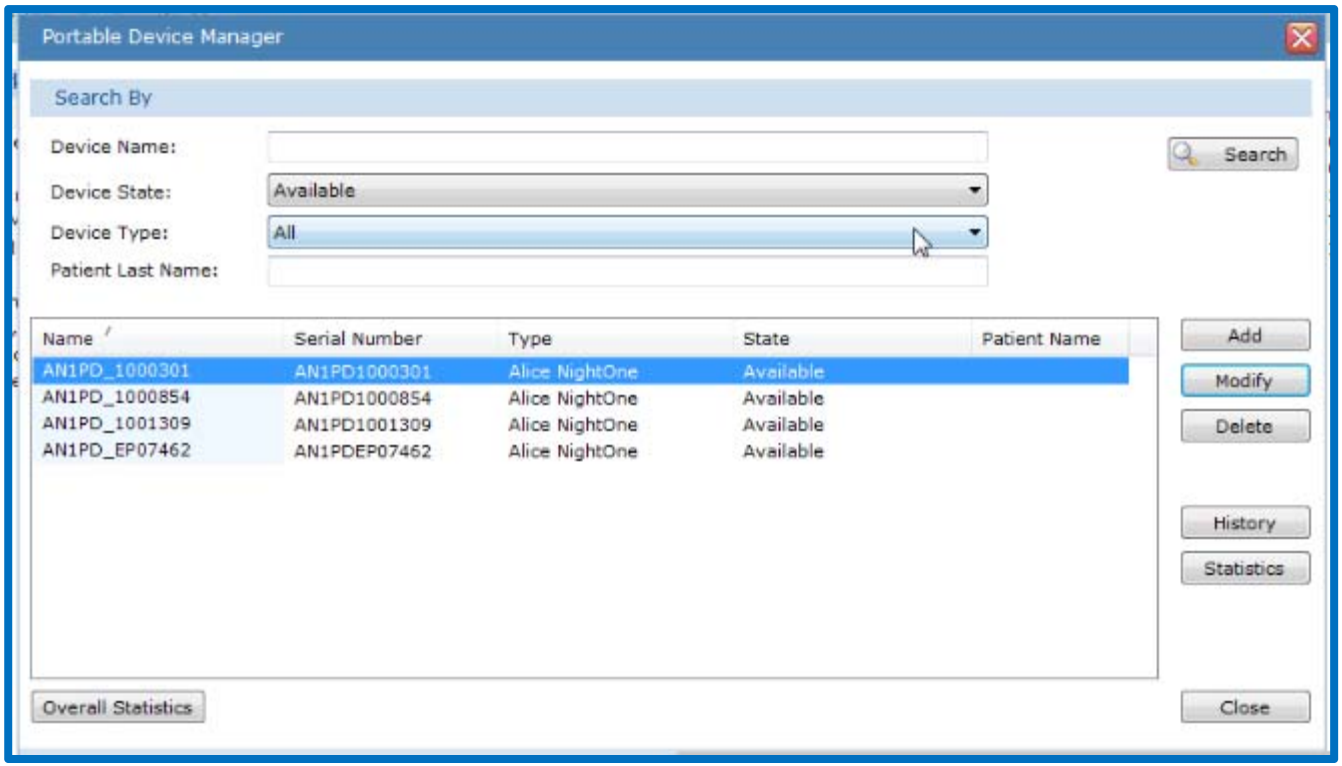
Sleepware G3 Main Menu > Tools > Portable Device Manager

PHILIPS

Portable Device Manager Tool

To access the portable device manager tool, select Tools from the Main Menu of Sleepware G3, then select Portable Device Manager from the drop-down menu.



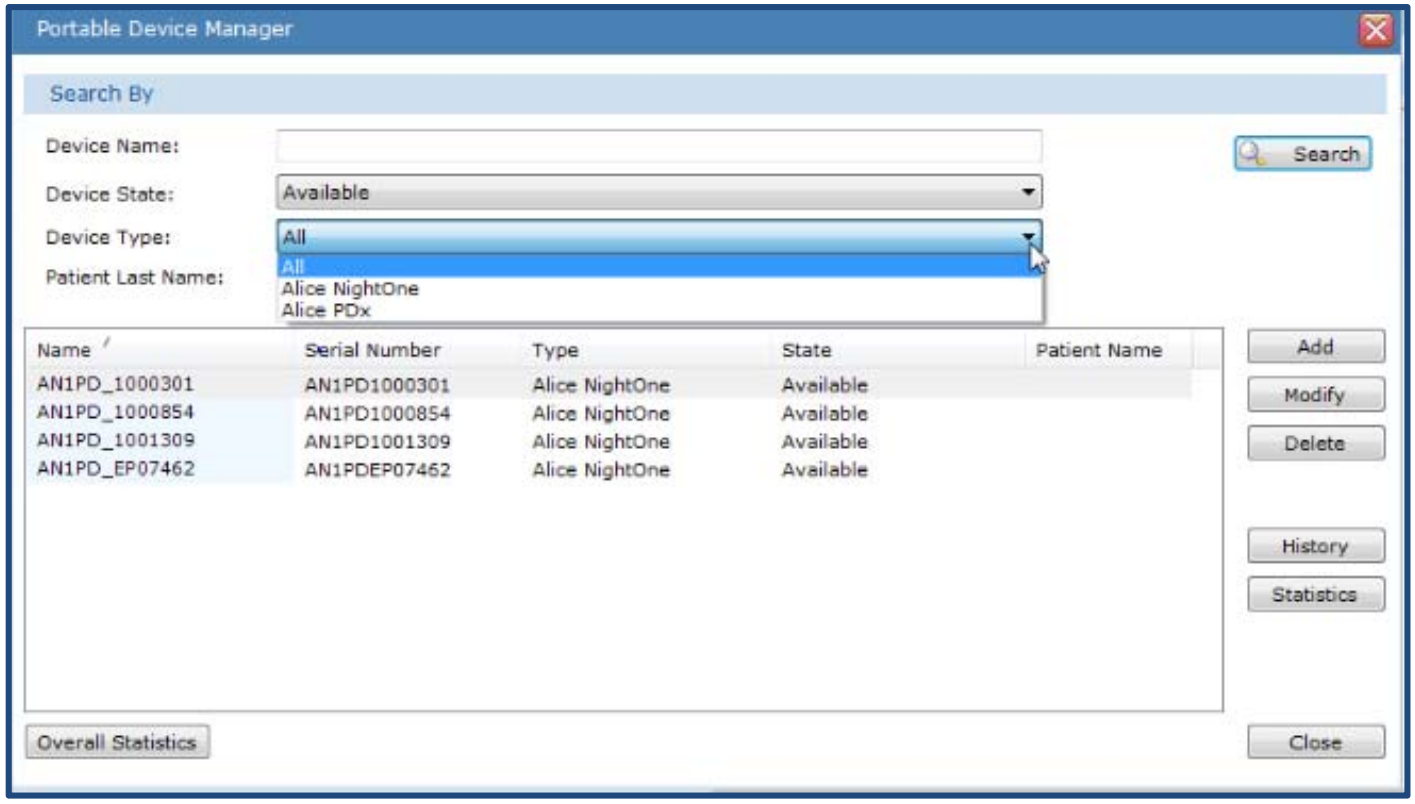


The Portable Device Manager tool allows you to manage devices: add, modify, and delete devices as well as search, filter, sort, and view the history of one device and view statistics of one, several, or all devices.

PHILIPS

Portable Device Manager Tools

You can search by Device State or Device Name



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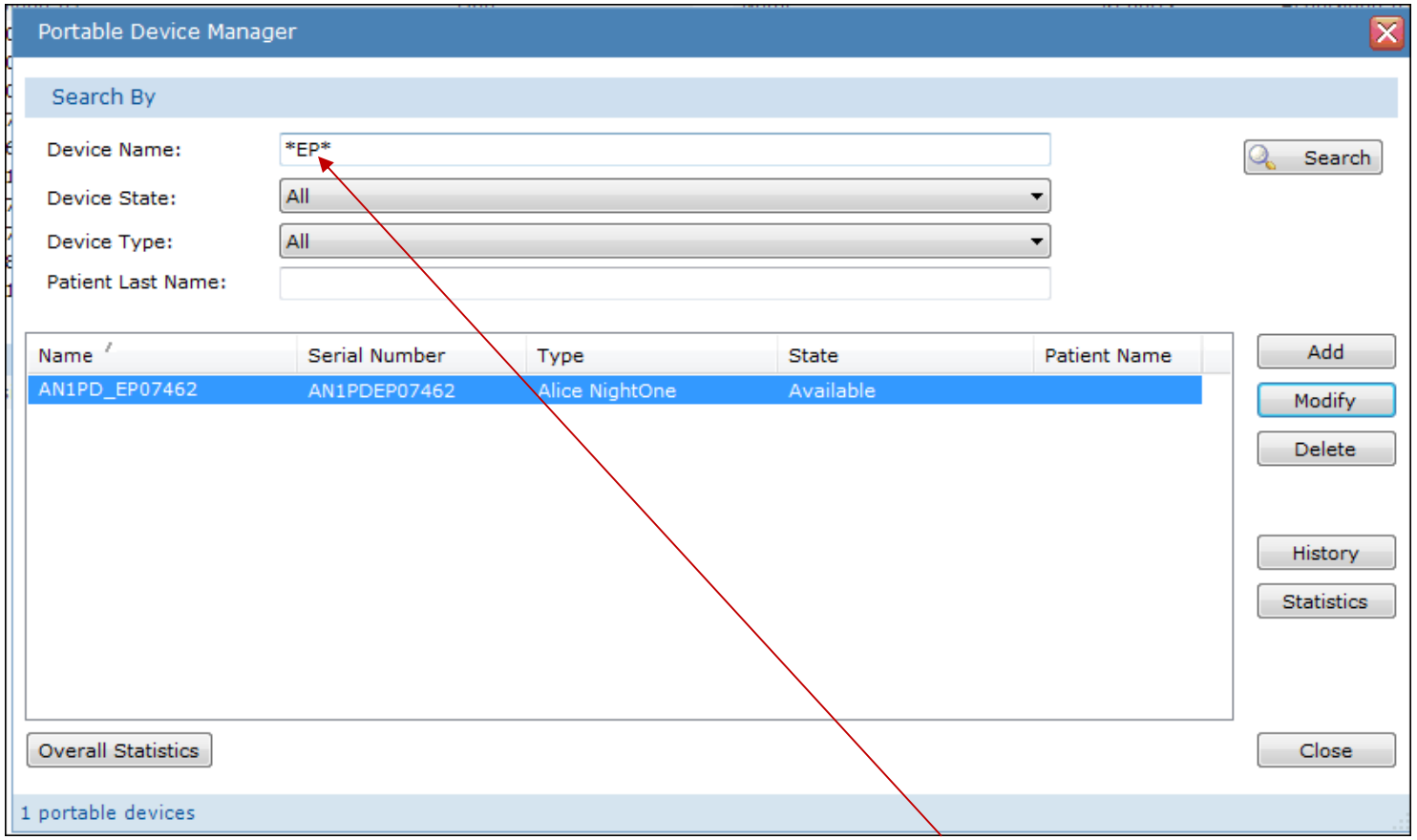
Portable Device Manager Tools

You can also search by Device Name

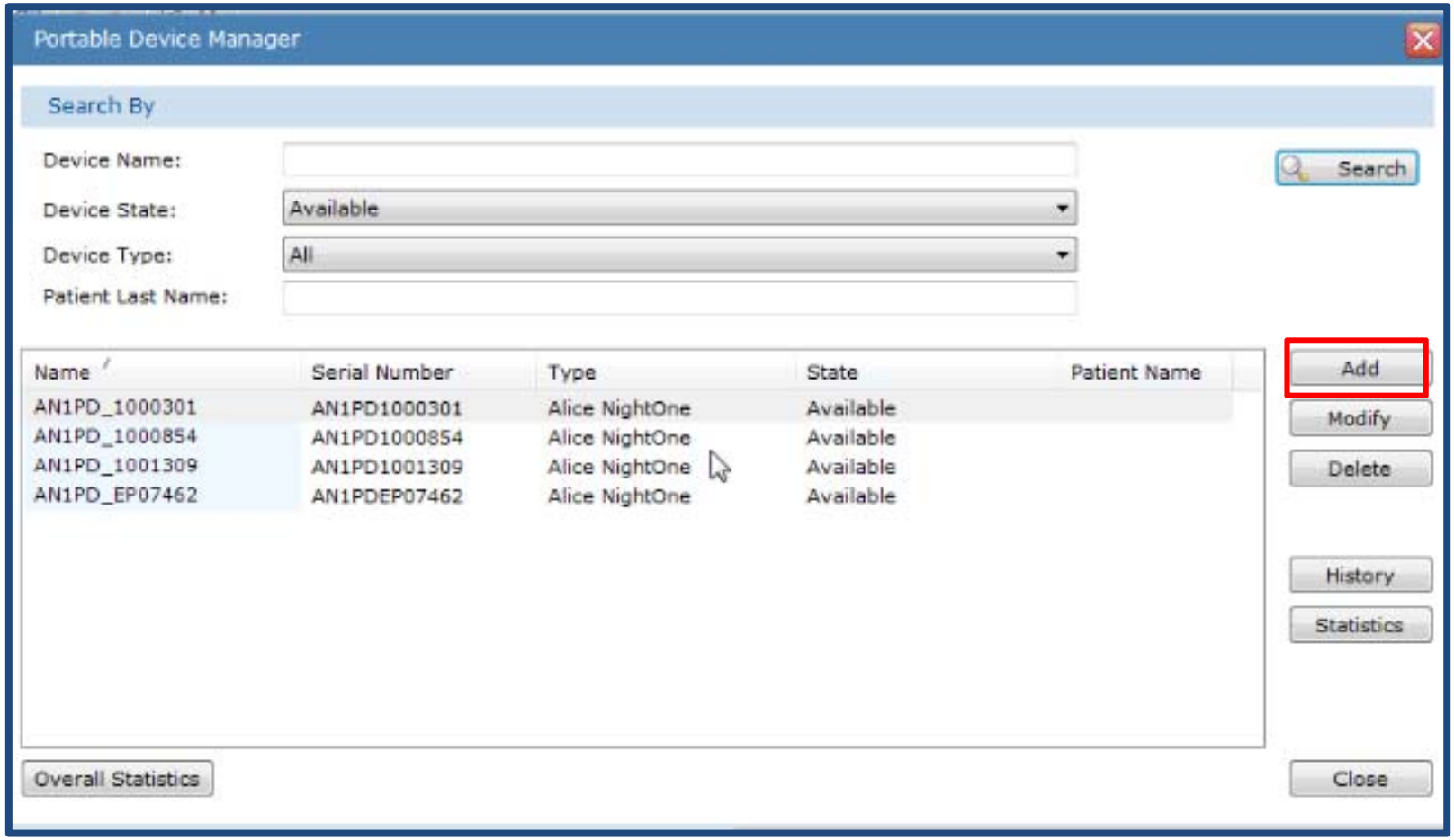


When searching by Device Name, you could use an asterisk (*) within a **search** as a placeholder for any unknown or wildcard terms.
For example, search for *EP* will bring up device name: AN1PD_**EP**07462

PHILIPS

Portable Device Manager Tools

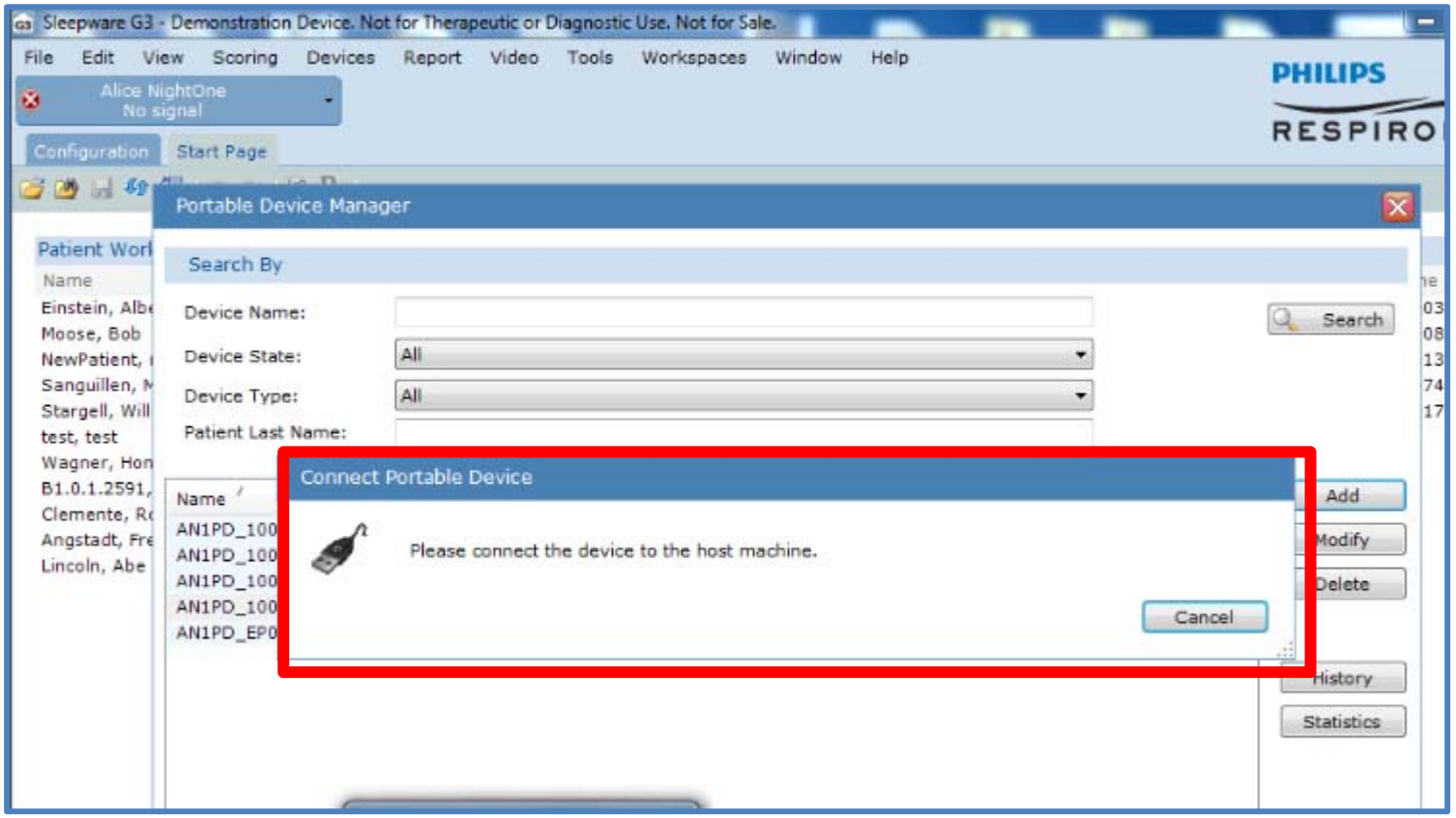
To add a device to Portable Device Manager, select the Add button.



PHILIPS

Portable Device Manager Tools

Once Add has been selected, a dialog box appears prompting you to connect the device you are adding to the host computer.

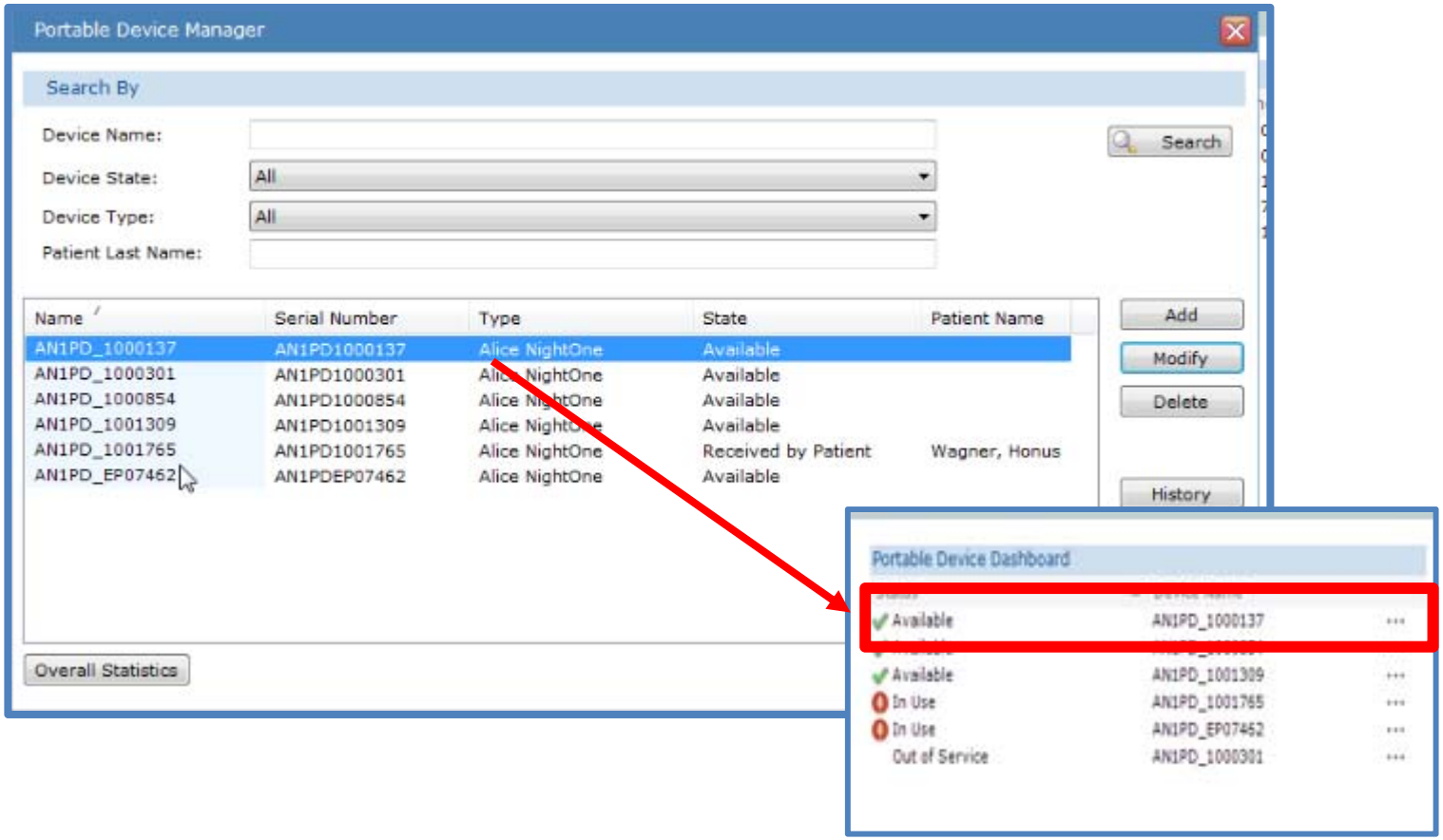


When adding an Alice NightOne device, the device does not need to be powered on nor do the batteries need to be inserted. The device obtains power from the USB port for this function. When adding an Alice PDx device, batteries must be inserted and the device must be powered on to communicate with the PC. It cannot be powered by the USB port. If you connect it to the PC to add it without being powered on, you'll see this message: "Please power on the device."

PHILIPS

Portable Device Manager Tools

The device will be added to the list. The newly added device is highlighted at the top of the list. This device will also appear on the Dashboard in the Available state.

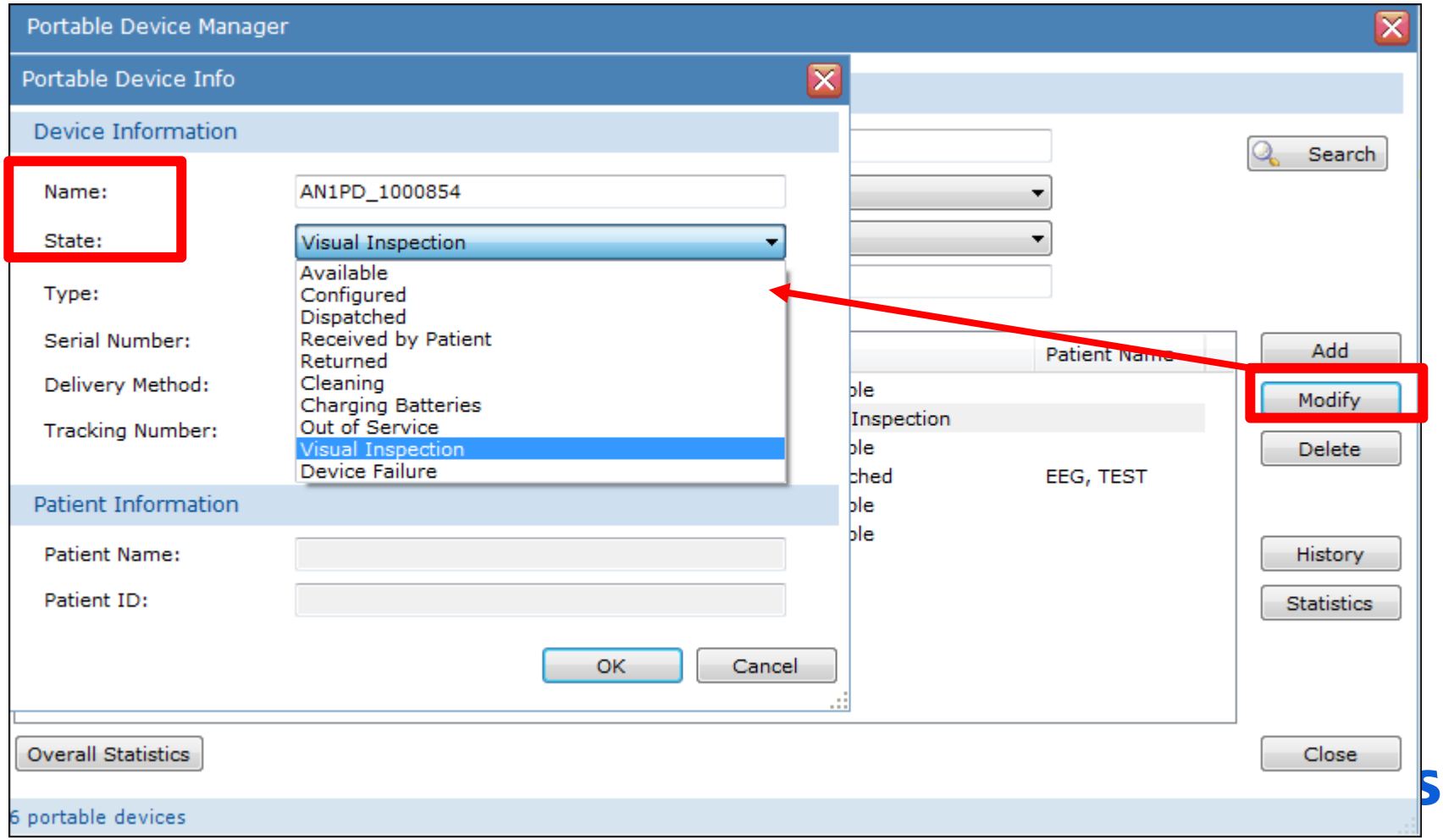


PHILIPS

Portable Device Manager Tools

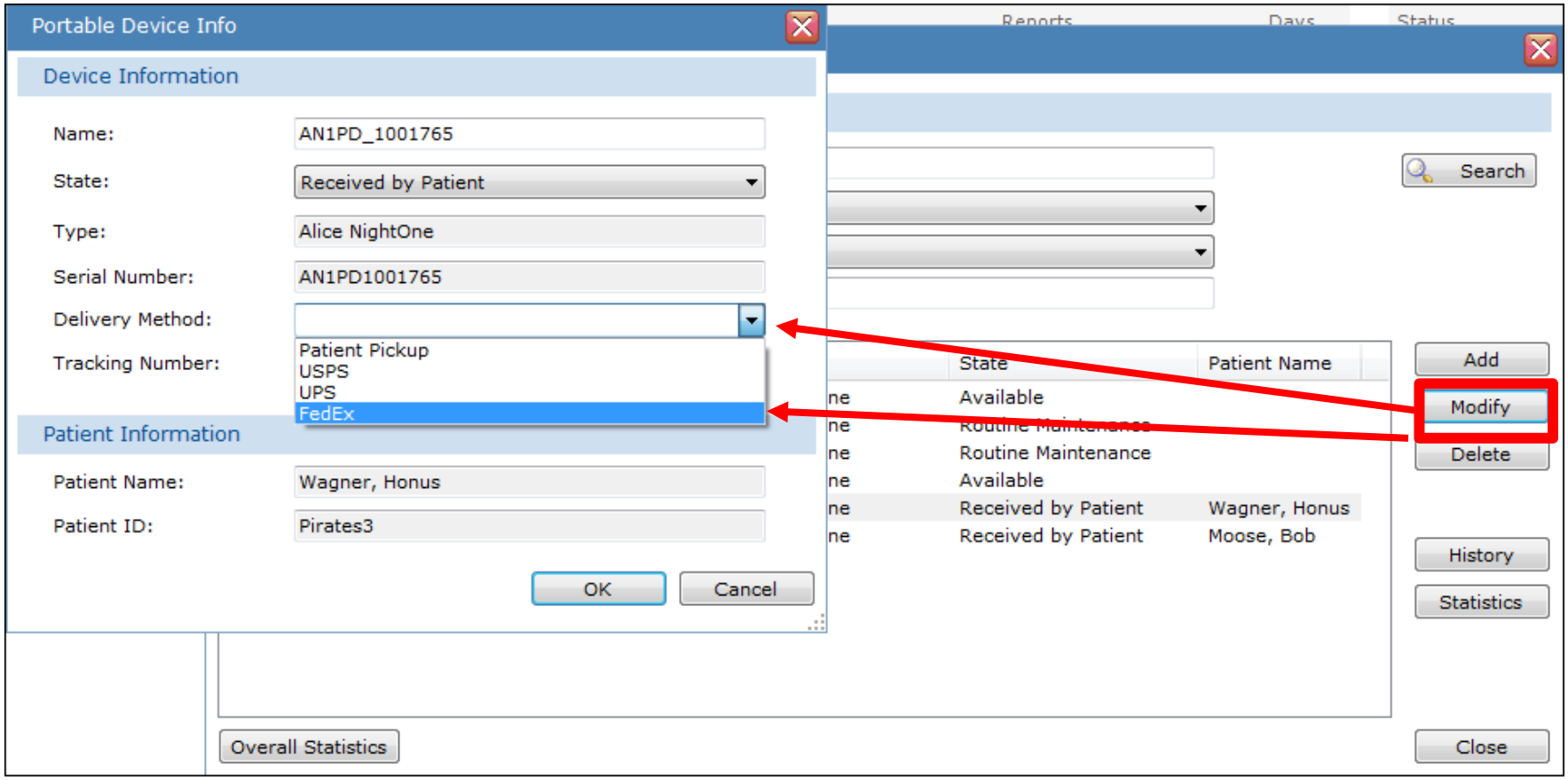
The Modify feature allows you to change the state of a device. In this example it is being changed from “Visual Inspection” back to “Available.”

You can also edit the name of the device. By default the name shows the device type, such as AN1, for Alice NightOne, followed by “_” and serial number of the device. You can change it to whatever name that makes sense to you for easy tracking purposes.



Portable Device Manager Tools

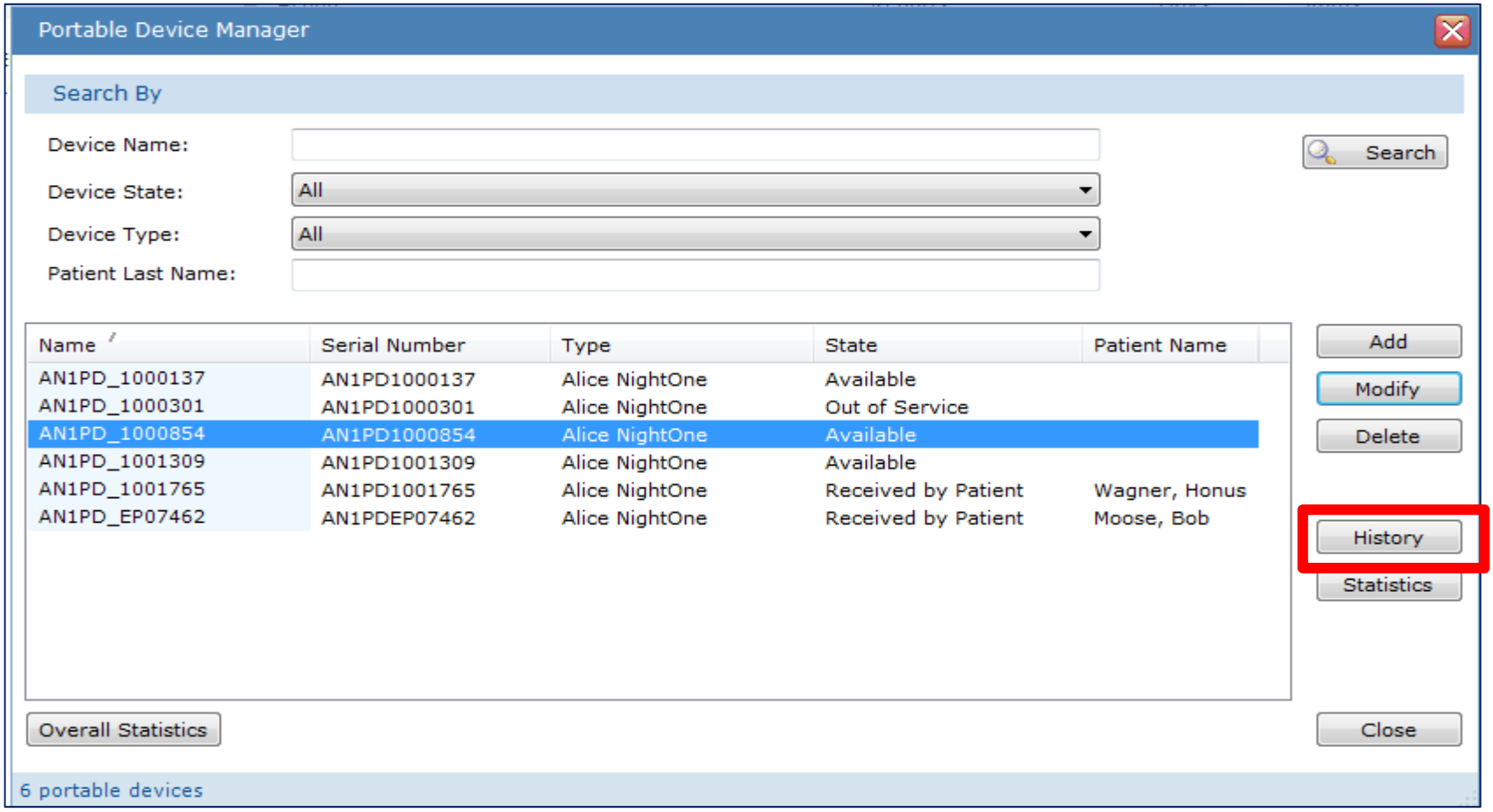
The Modify feature also allows you to add or change the delivery method and enter a tracking number for the delivery, if necessary. The default delivery methods are Patient Pickup, USPS, UPS, and FedEx. New entries for delivery method can be created by free-typing the chosen method into the Delivery Method box.



PHILIPS

Portable Device Manager Tools

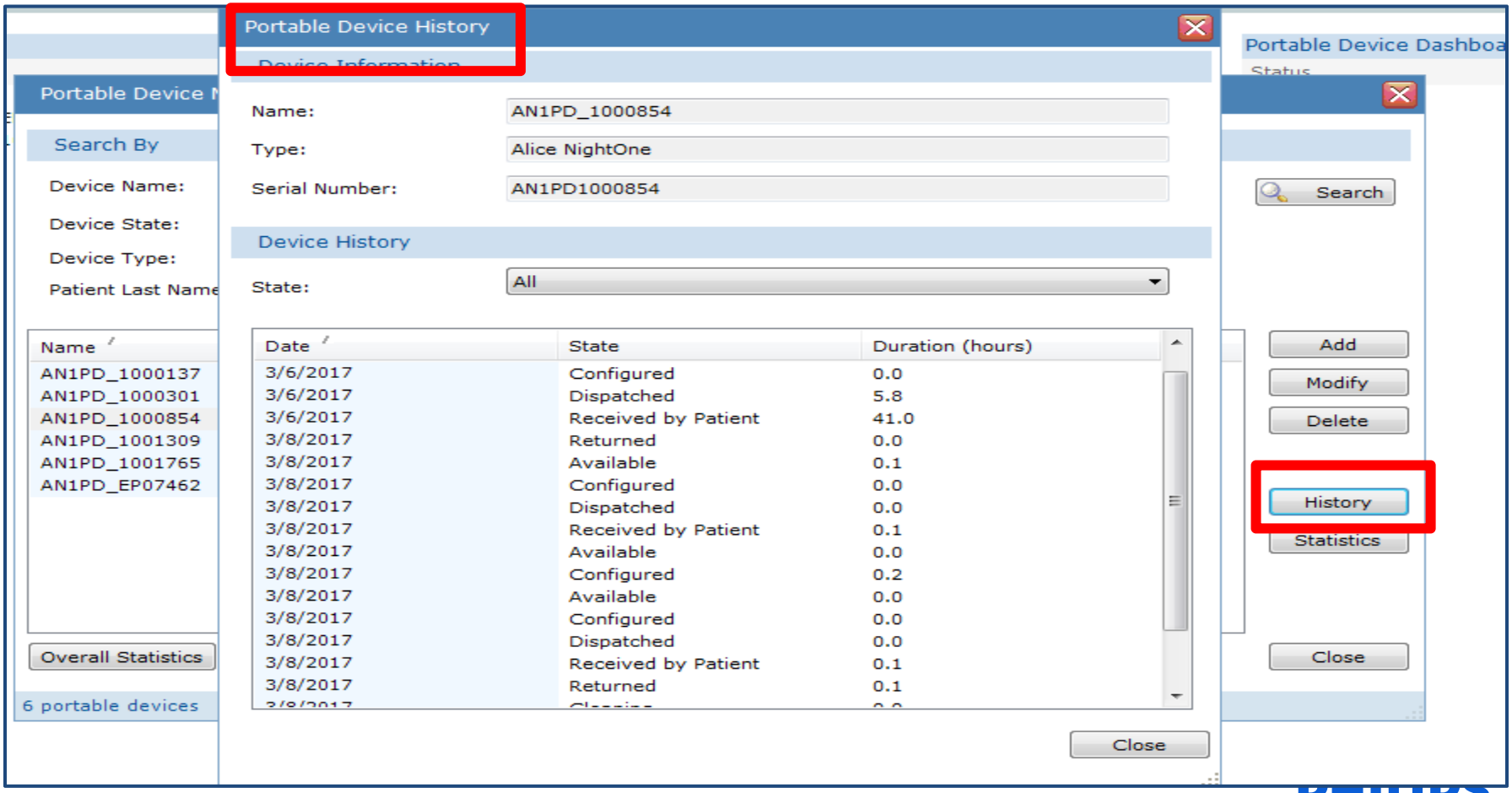
To view the history of a device, highlight the device on the list and select the History button. Only a single device history can be viewed.



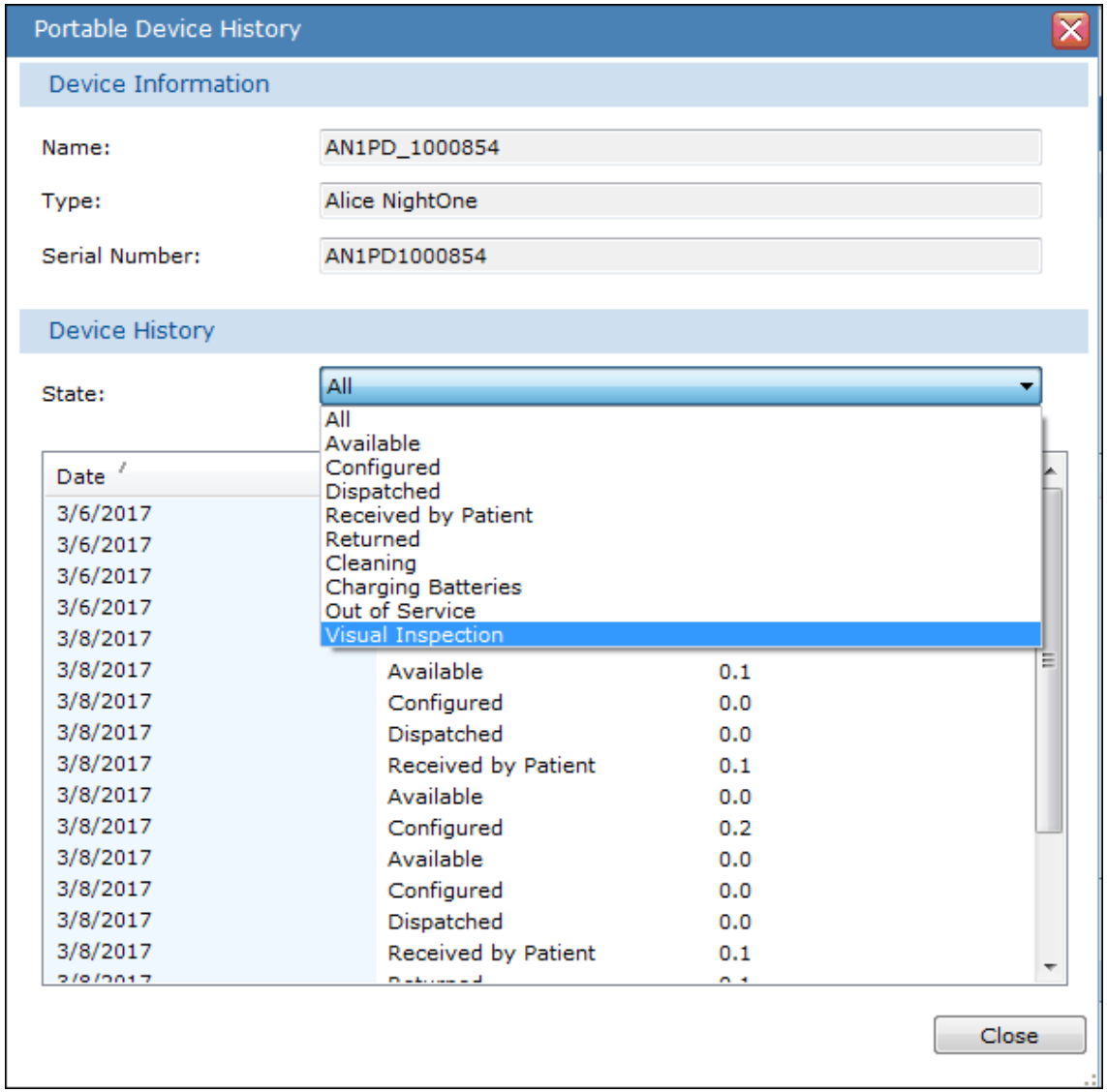
PHILIPS

Portable Device Manager Tools

Once History has been selected, the portable device history dialog box is displayed. Each workflow cycle the device has gone through is displayed. The columns available for viewing the history are Date, State and Duration. The same date can be listed multiple times to show various states the device has been through in the workflow on a single day, or spread out on different days, as indicated in the State column. The Duration column displays the number of hours that the device remained in the corresponding state.



Portable Device Manager Tools

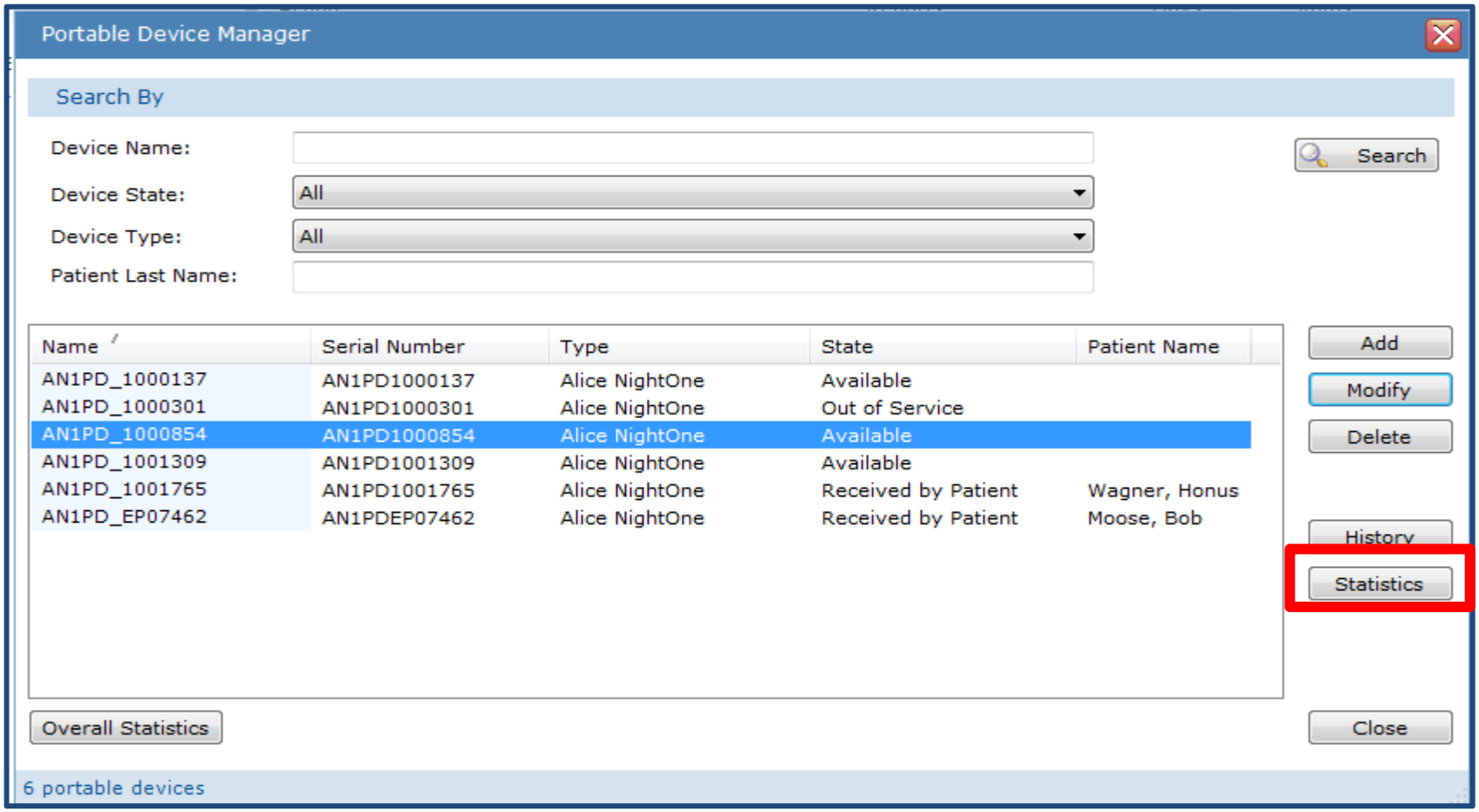


When viewing the **history** of a device, it is possible to filter the device history states to view individual state information, such as when Visual Inspections were performed.

PHILIPS

Portable Device Manager Tools

The **Statistics** button is available so you can view the statistics of one, several, or all devices on the list. To check the statistics on one, highlight the device on the list and select the statistics button.



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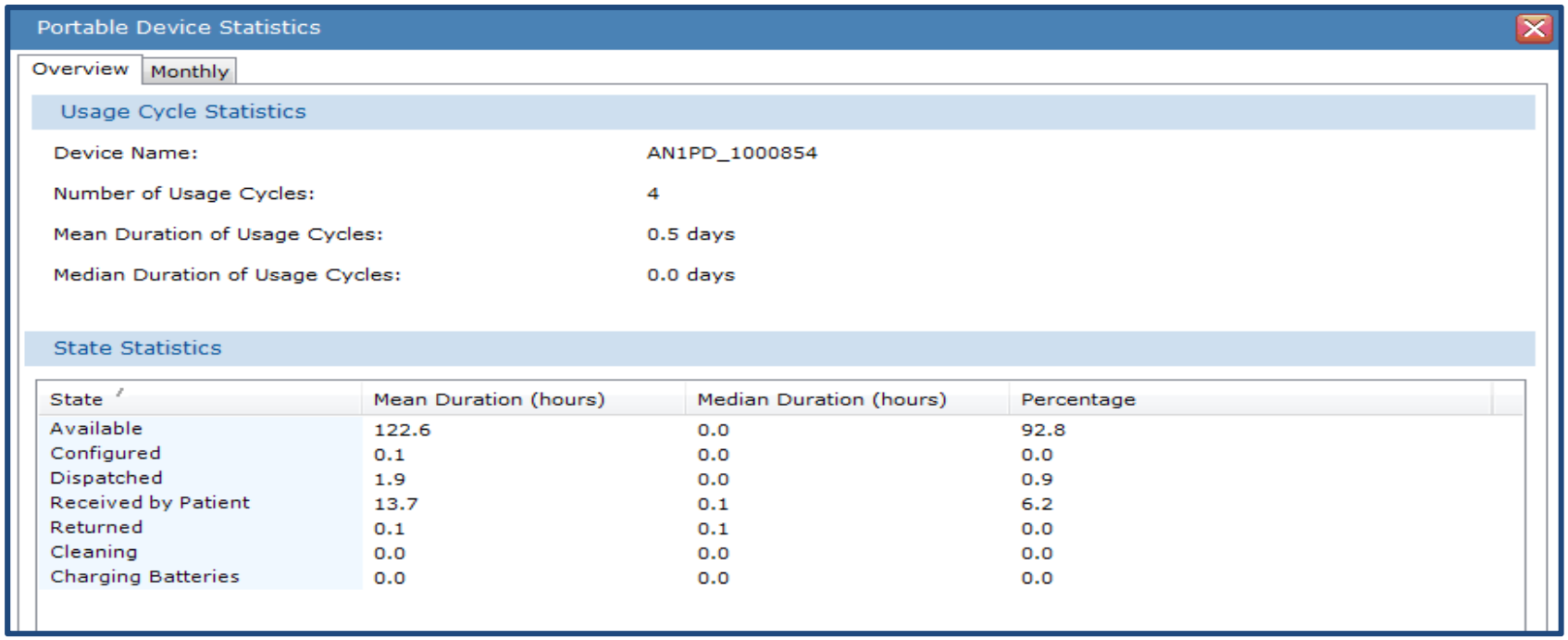
Portable Device Manager Tools
Device Statistics

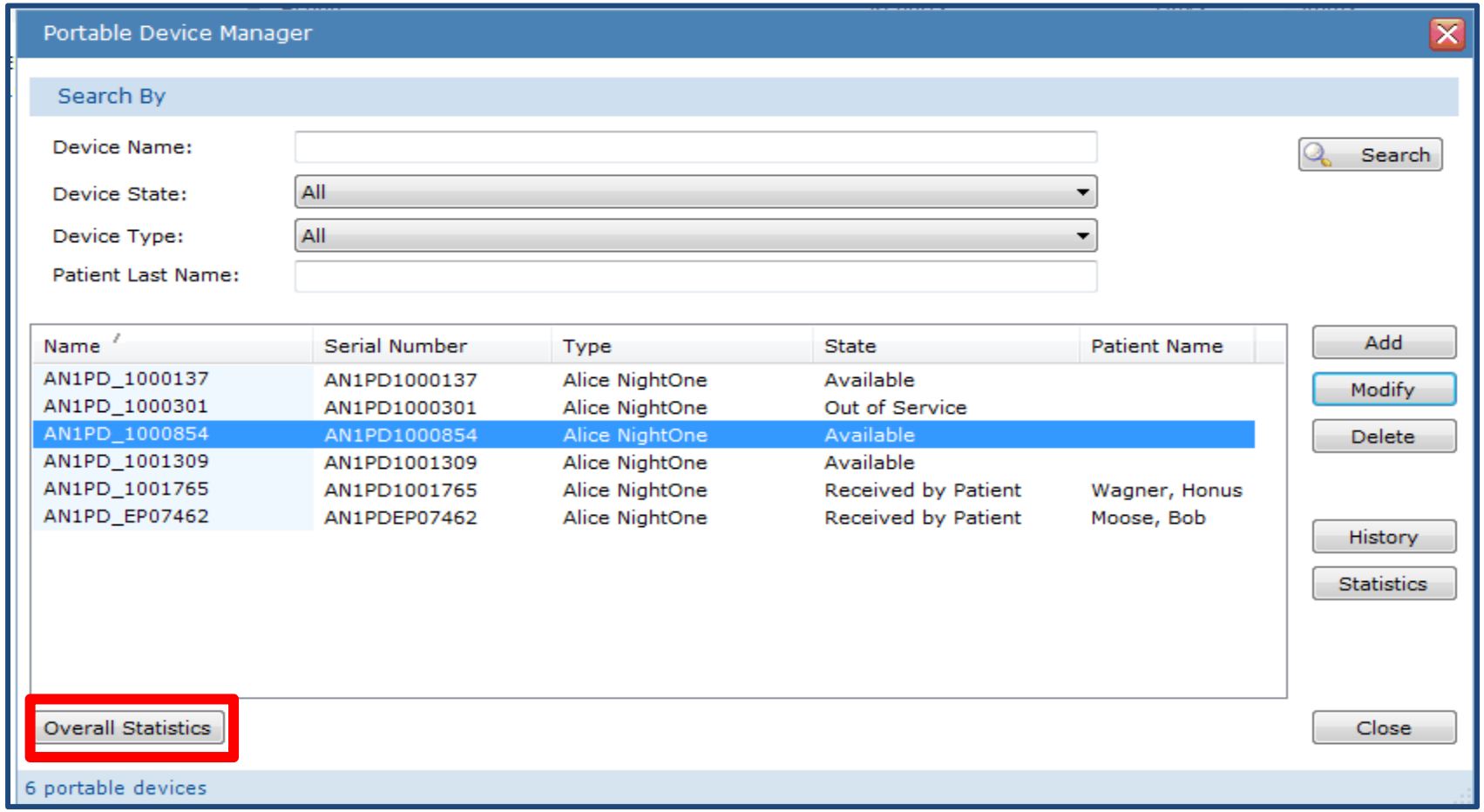
The portable device statistics window opens and shows an overview of all states of the device combined over time. The information shows the Device Name for the selected unit, the number of usage cycles the device has experienced, as well as a tally of the Mean and Median durations for each cycle state and the Percentage of time spent in each state.



PHILIPS

Portable Device Manager Tools

To view the statistics of all devices, select the **Overall Statistics** button.



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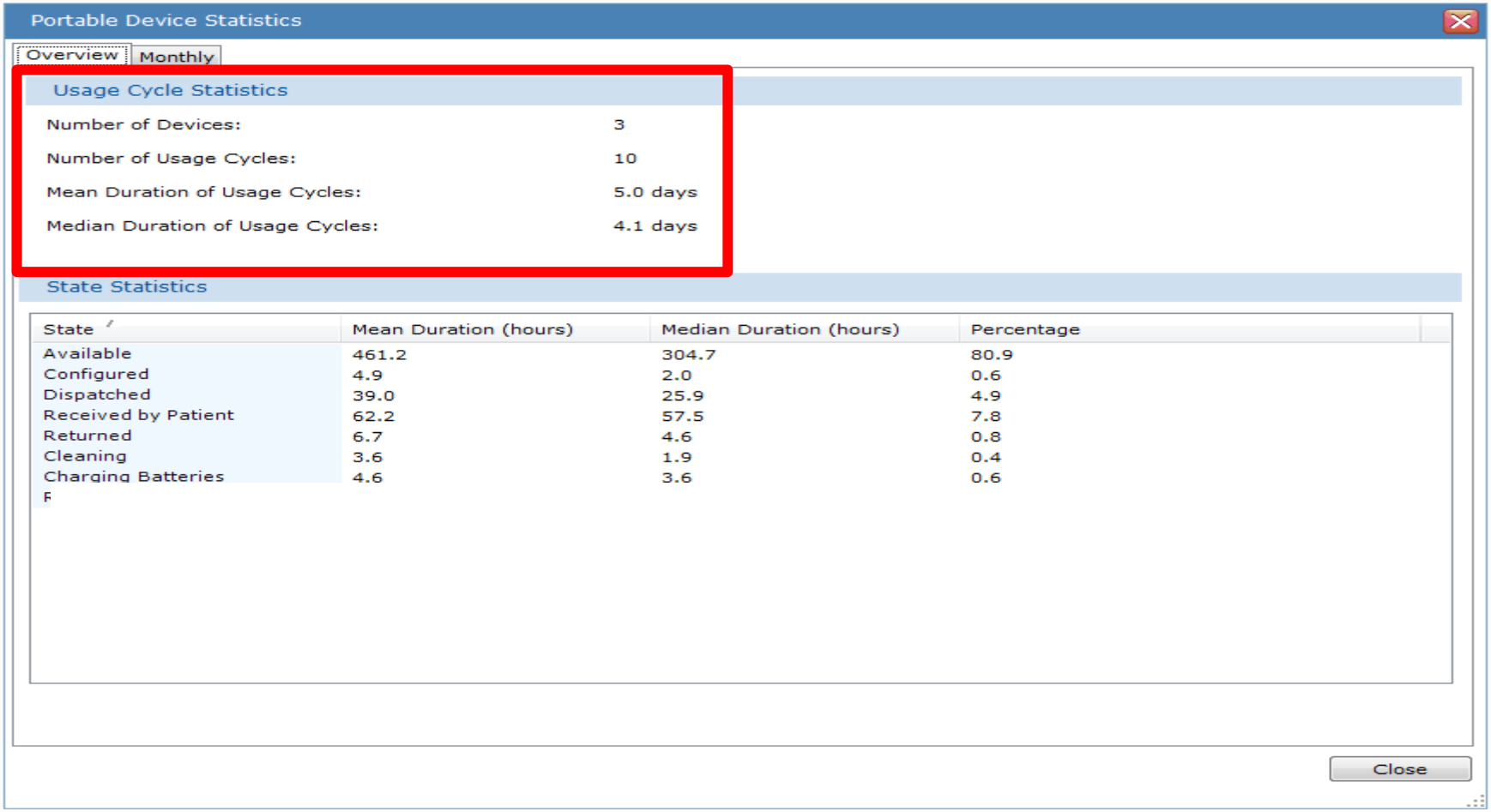
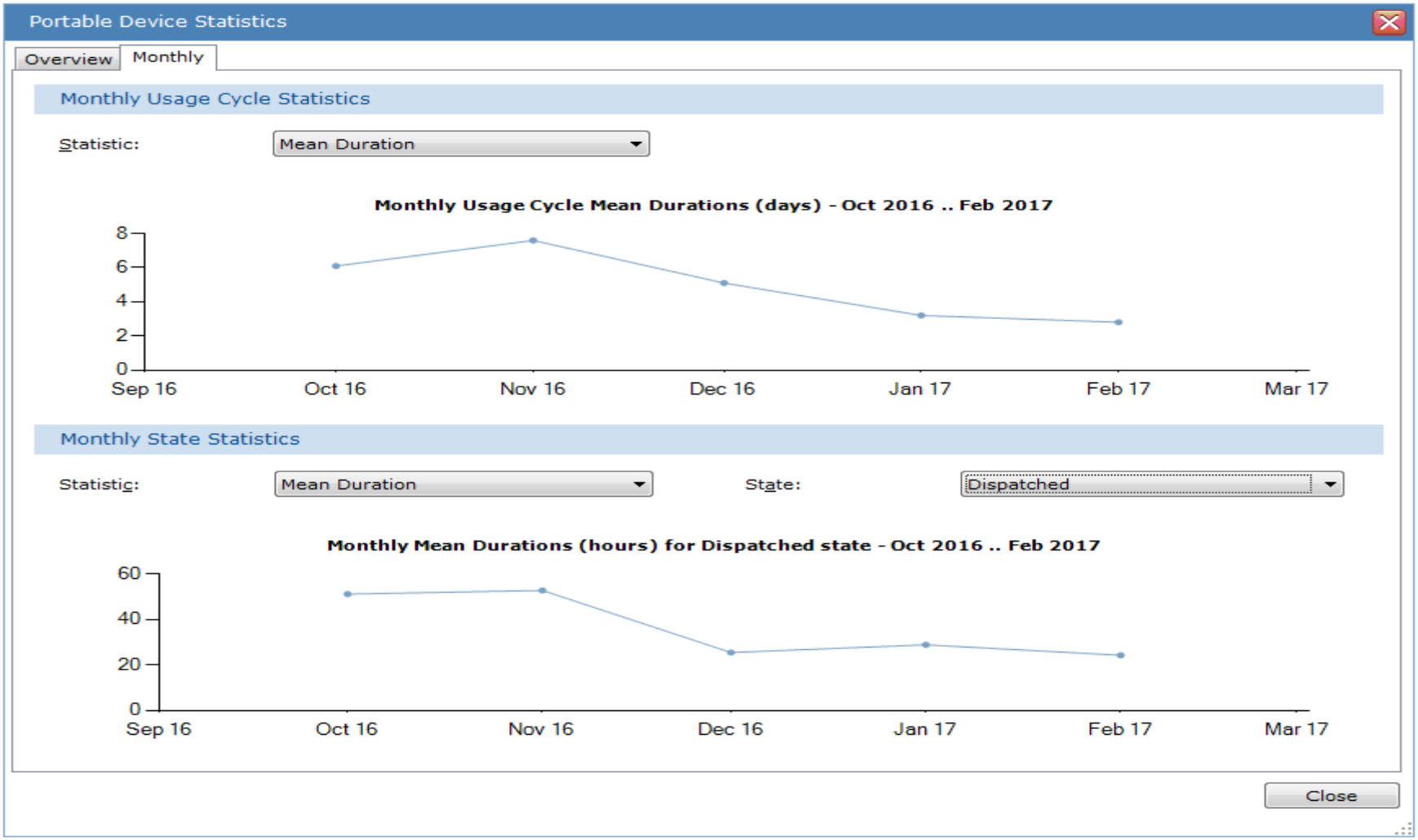
Portable Device Manager Tools

The statistics for all devices will appear. The Overview tab shows the number of devices being reported, the number of usage cycles for all combined, the mean duration of usage cycles, and the median duration for usage cycles.



Portable Device Manager, monthly statistics

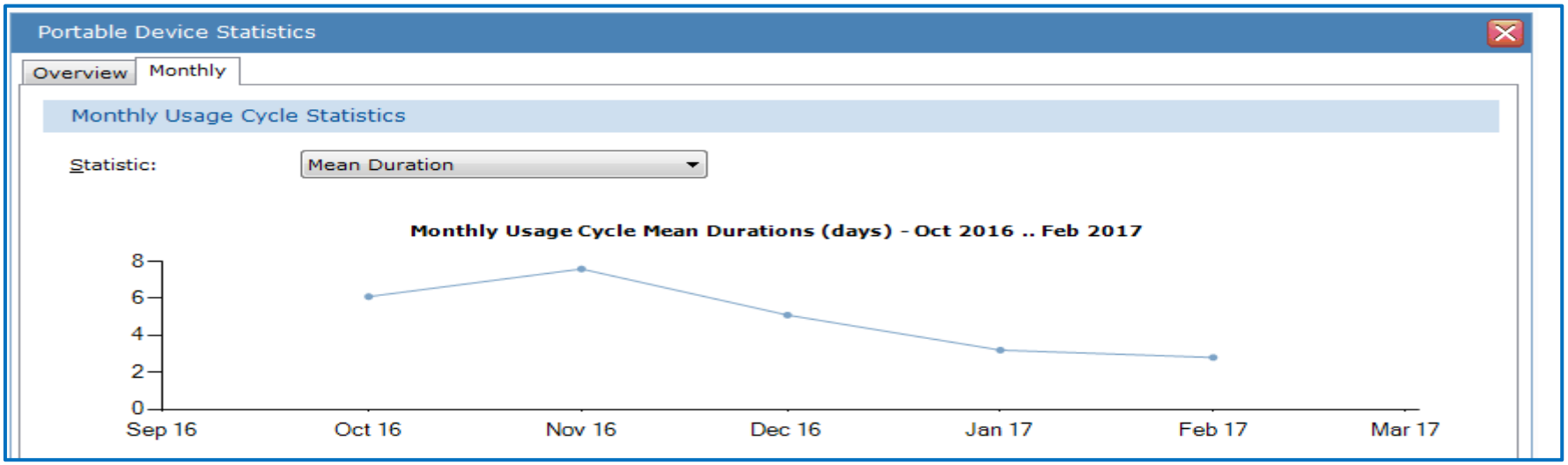
Select the **Monthly** tab to view the statistics of devices as they change month to month. The monthly statistics are depicted as a line graph. The graphs are visual representations of how efficiently a company uses its portable devices over time.



PHILIPS

Portable Device Manager

The Monthly Usage Cycle Statistics graphs can display the Mean and Median Durations trending month to month. The default is Mean Duration. Use the Statistics drop-down arrow to view the Median Duration.



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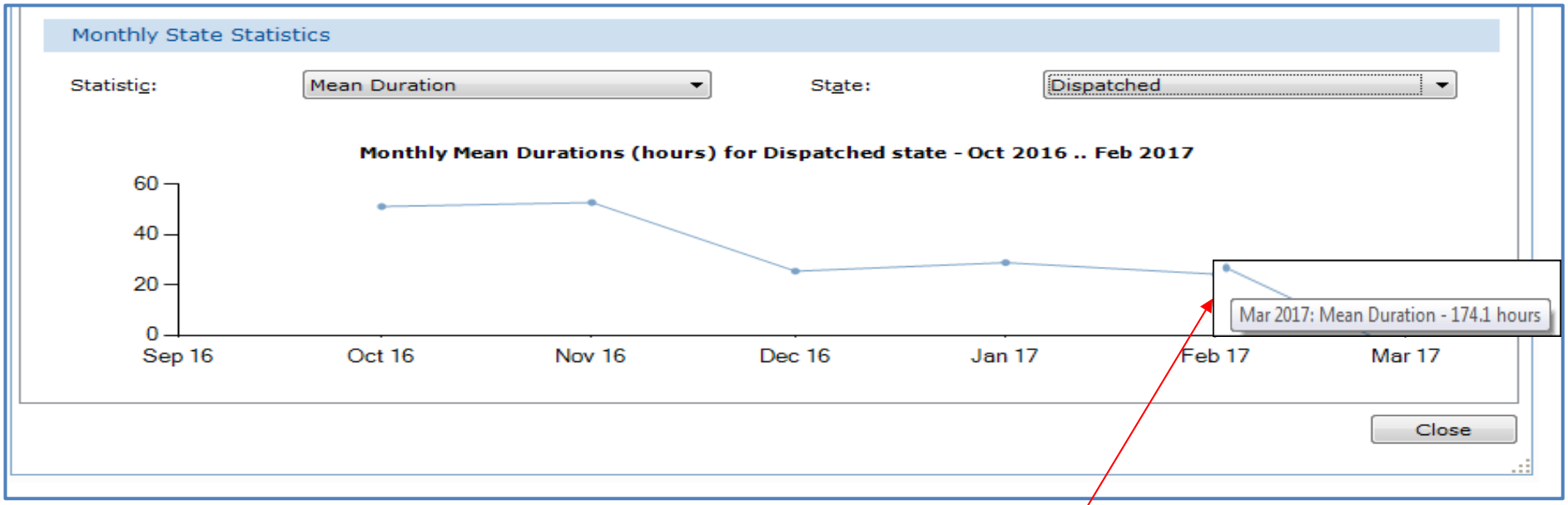
Portable Device Manager, monthly statistics

The Monthly State Statistics can show a trend of Median, Mean or the Percentage of time spent in each state over time.

To change the state, select the arrow on the drop-down menu for State.

Also, you can place the mouse pointer over a "node" or "dot" in the graph to view its corresponding data.



Hover mouse pointer over "node" or "dot" to display details

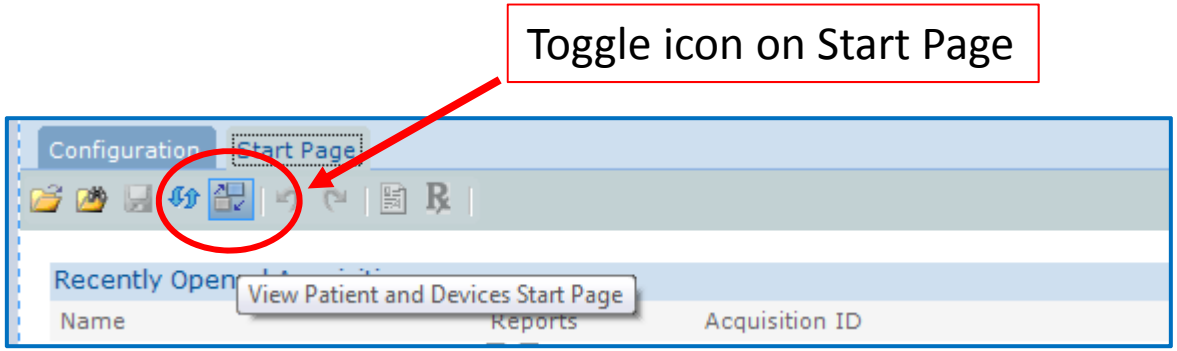
PHILIPS

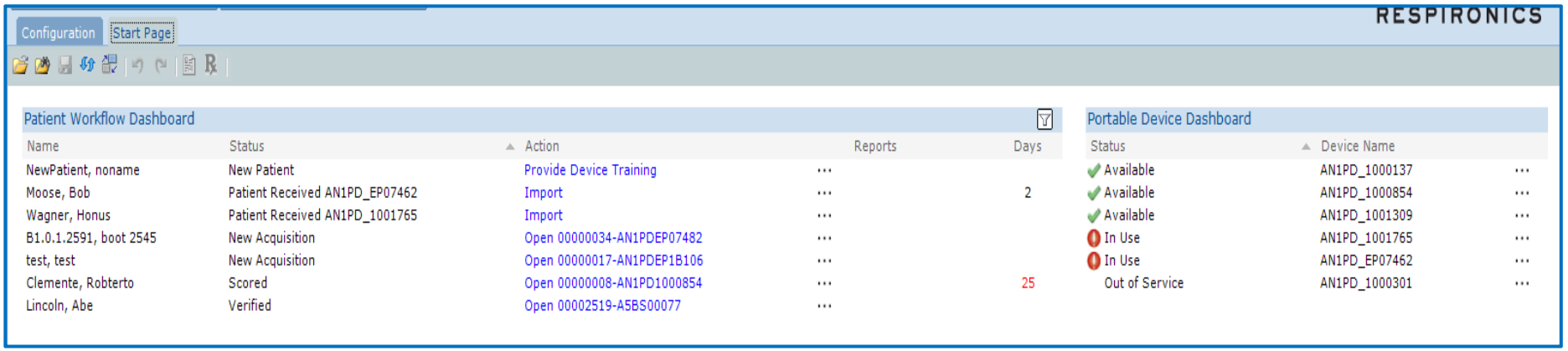
Portable Device Manager

Device and Patient Dashboard

PHILIPS

Device and Patient Dashboard





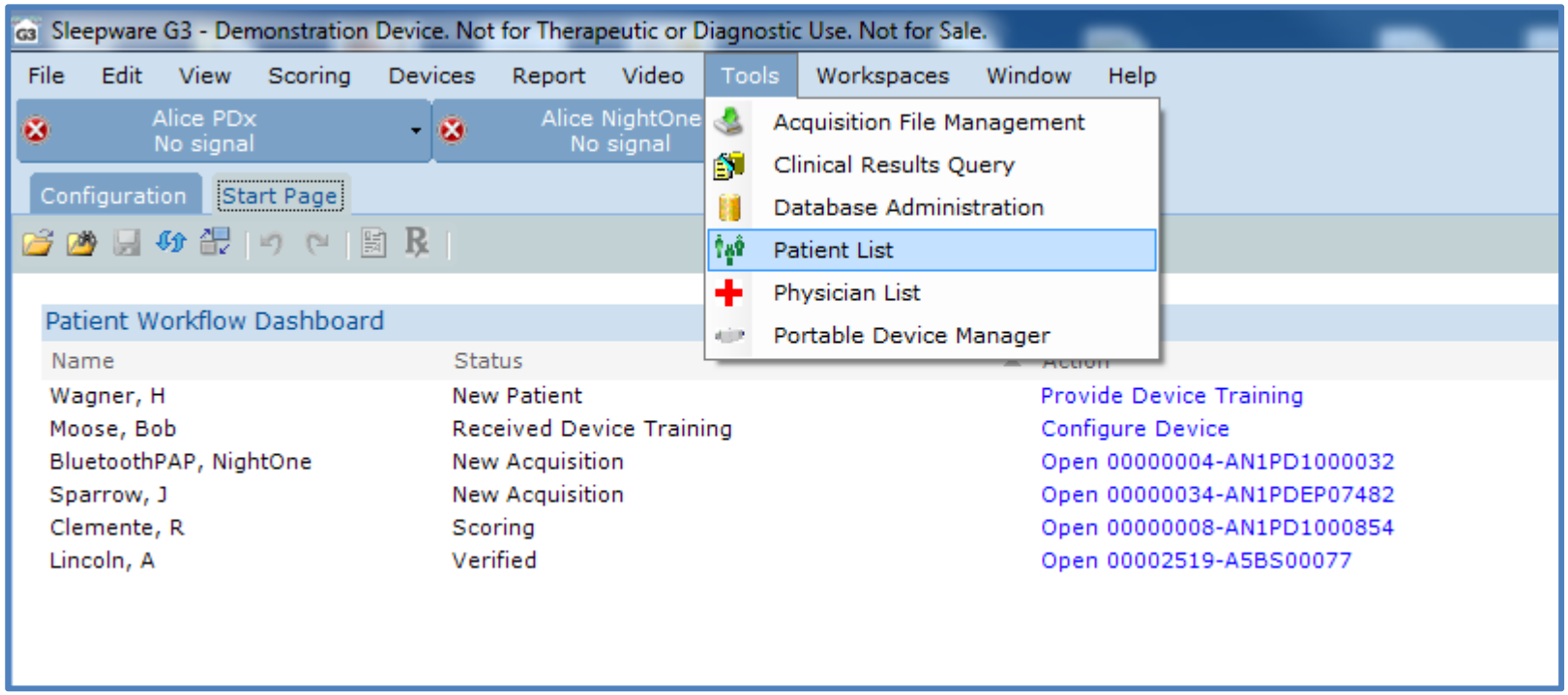
The Portable Device Manager adds a second Start Page to Sleepware G3. This new start page is in addition to the Acquisition List start page. You can click on the toggle icon to switch between the two. This new Start Page is called the **Patient and Device Start Page**. You can quickly see which devices are available and ready for testing, which are in use, and track where a patient is in the home sleep test process. A user can also see a list of patients that are currently in the testing workflow for portable tests, and PSG tests.

PHILIPS

Device and Patient Dashboard

How to add a patient to the dashboard

1. Tools > Patient List

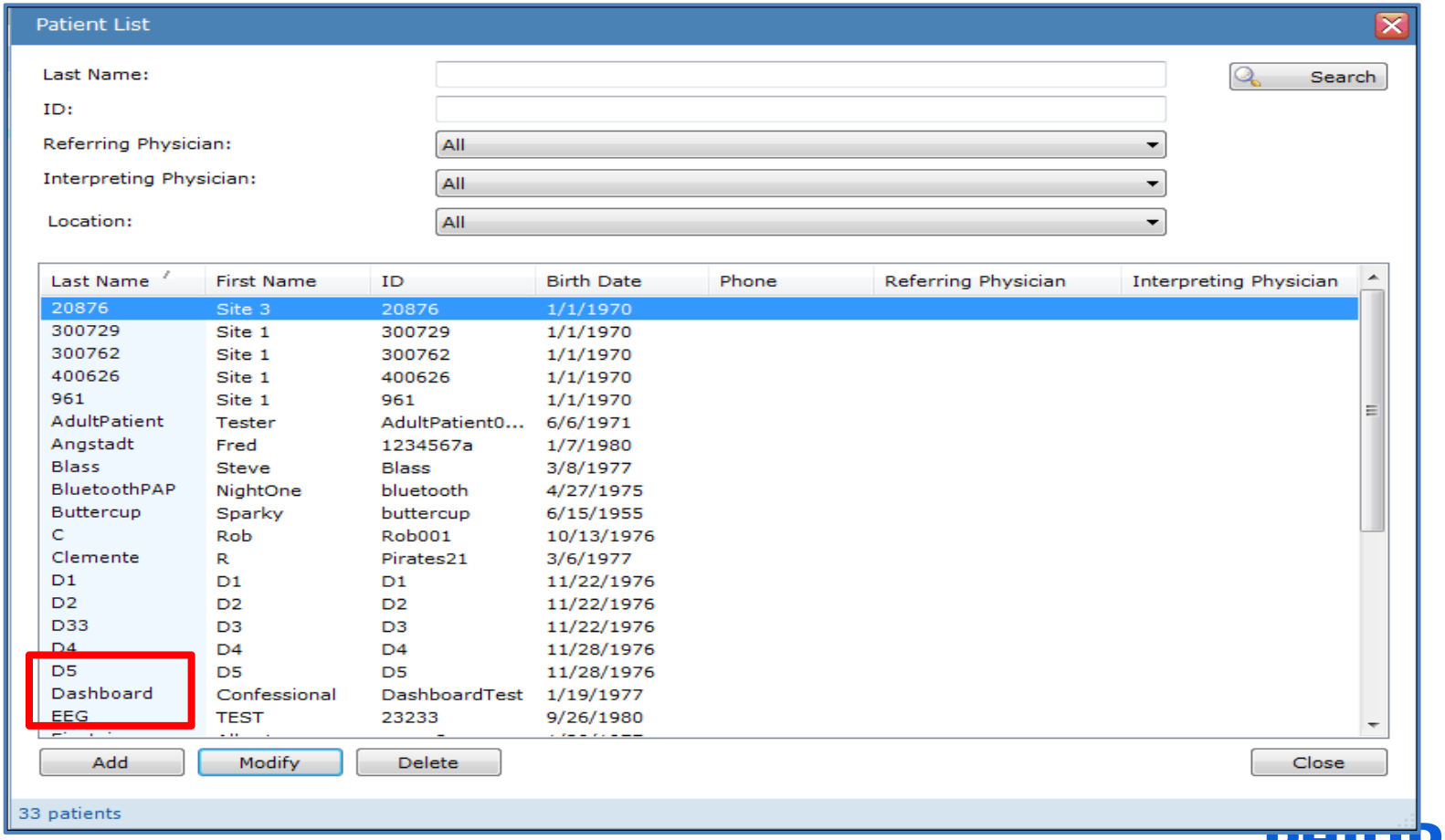


PHILIPS

Device and Patient Dashboard

How to add a patient to the dashboard

Step 2: Select “Add”

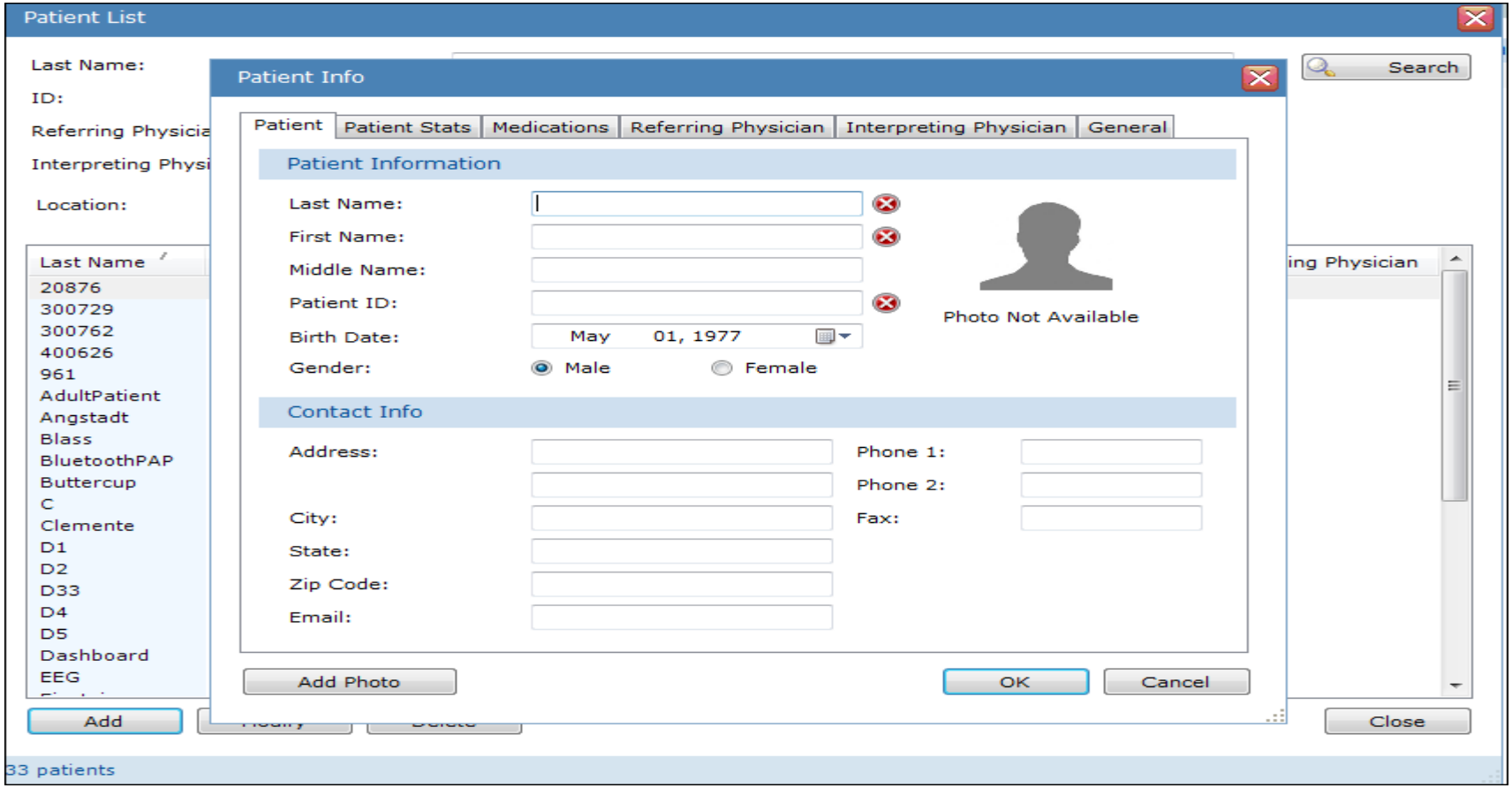


PHILIPS

Device and Patient Dashboard

How to add a patient to the dashboard

Step 3: Add, at minimum, required fields: Last Name, First Name and Patient ID
(ID must be unique)

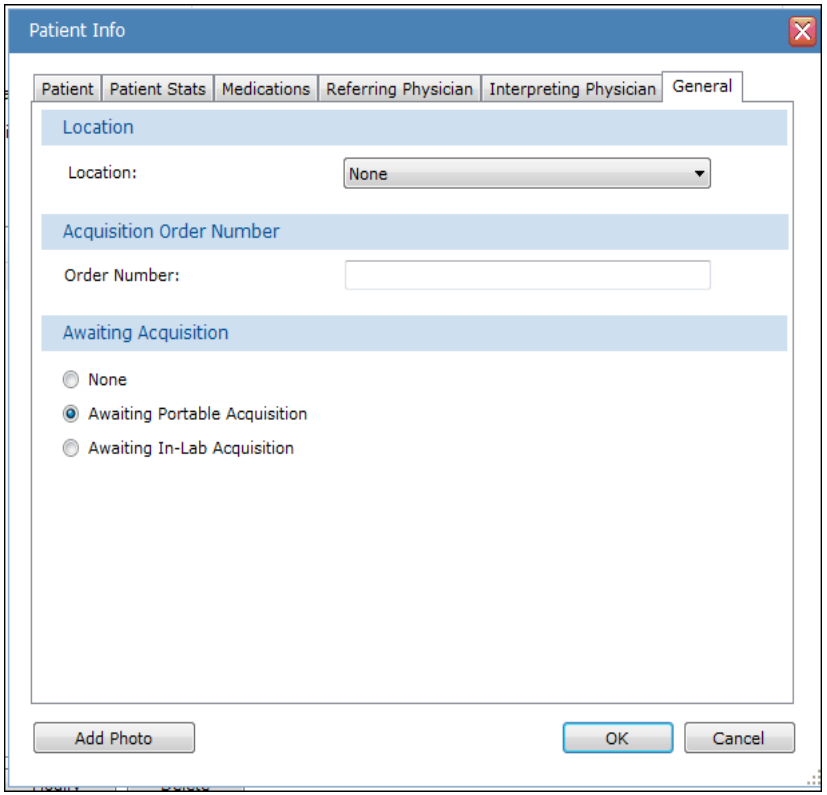


PHILIPS

Device and Patient Dashboard

How to add a patient to the dashboard

Step 4: Select the General Tab. Under the Awaiting Acquisition section, choose the test in which the patient will undergo.



The default selection is Awaiting Portable Acquisition. If unchanged, the patient you are adding will be added to the Patient Workflow Dashboard with the status of "New Patient" and the Action state of "Provide Device Training."

If the selection is changed to Awaiting in-lab acquisition, this patient will appear on the Patient Workflow dashboard list as soon as the in-lab sleep study from Alice 6 integrates to Sleepware G3.

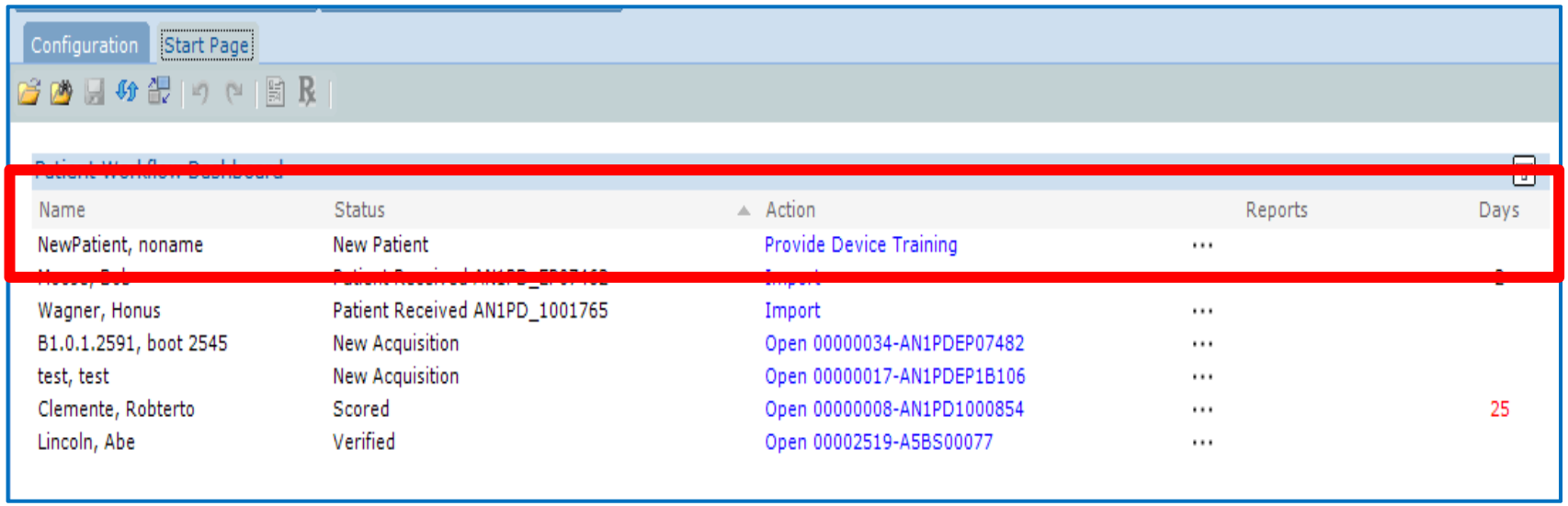
If None is selected, the patient and the acquired acquisition, portable or in-lab, will only appear on the traditional Acquisitions List Start Page.

PHILIPS

Device and Patient Dashboard

How to add a patient to the dashboard

The patient just added with ‘Awaiting Portable Acquisition’ selected, now appears on the Patient Workflow Dashboard with the status of “New Patient” and the Action state of “Provide Device Training”.

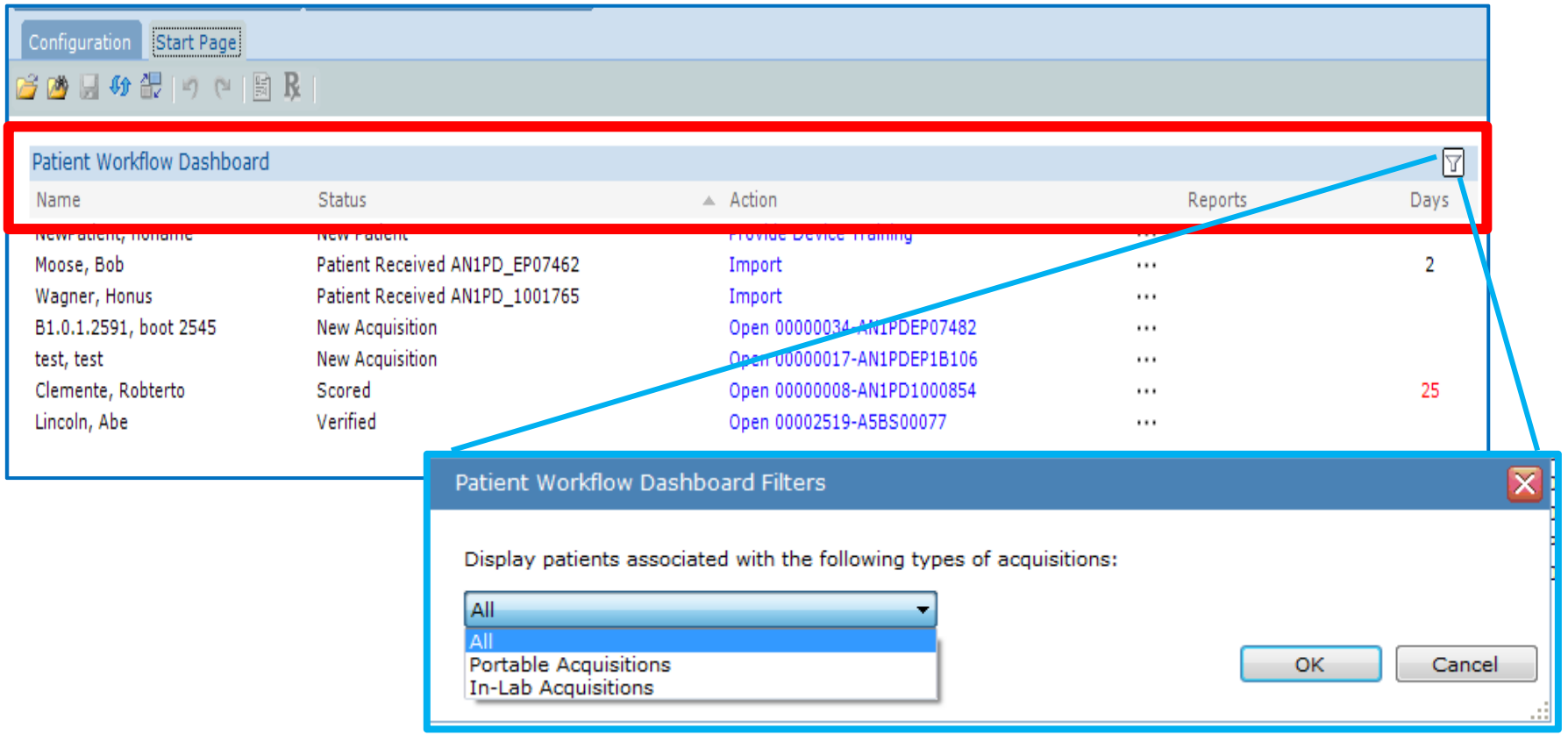


PHILIPS

Patient Workflow Dashboard Details

Columns:

Patient Name, Status, Action, Ellipses, Reports and Days. There is also a filter icon that allows you to filter by portable or in-lab acquisitions.

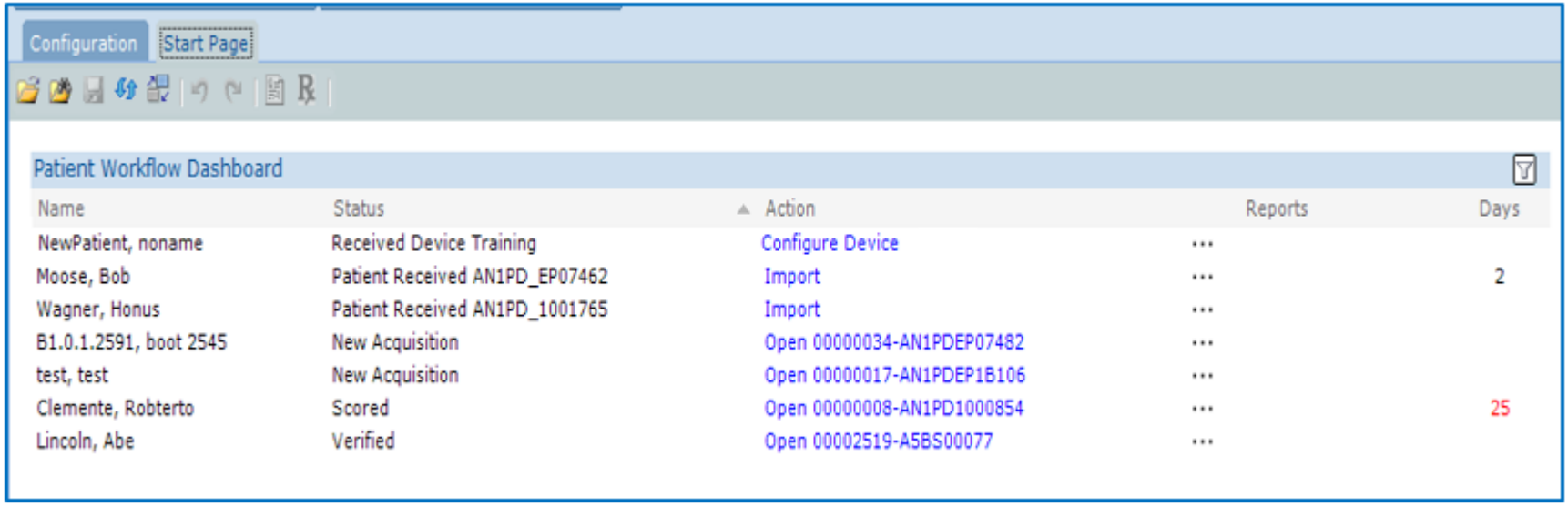


PHILIPS

Patient Workflow Dashboard

The **Status** column:

The Status column reflects where a patient is in the workflow cycle. The status for portable testing will change to the current state in the process when the action is changed. The various states are New Patient, Received Training, Configured, Dispatched, Patient Received Device, New Acquisition, and if the acquisition states are configured, Scoring, Scored, Verifying and Verified will also be available.

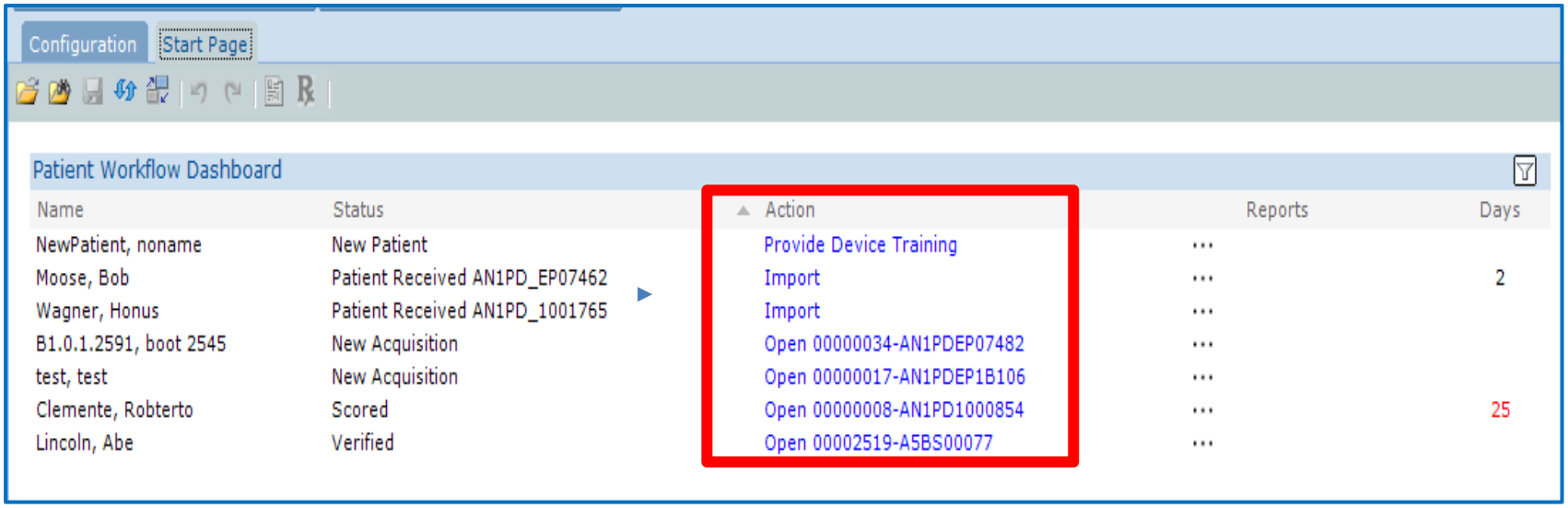


PHILIPS

Patient Workflow Dashboard

The **Action** column:

The action displayed in this column is dependent on what step is next in the workflow process. The action items on the list are hyperlinks. If you click on an action, the action that corresponds with the current step in the workflow process is presented. The actions to take are Provide Device Training, Configure Device, Mark as Dispatched, Mark as Received, Import, and Open.



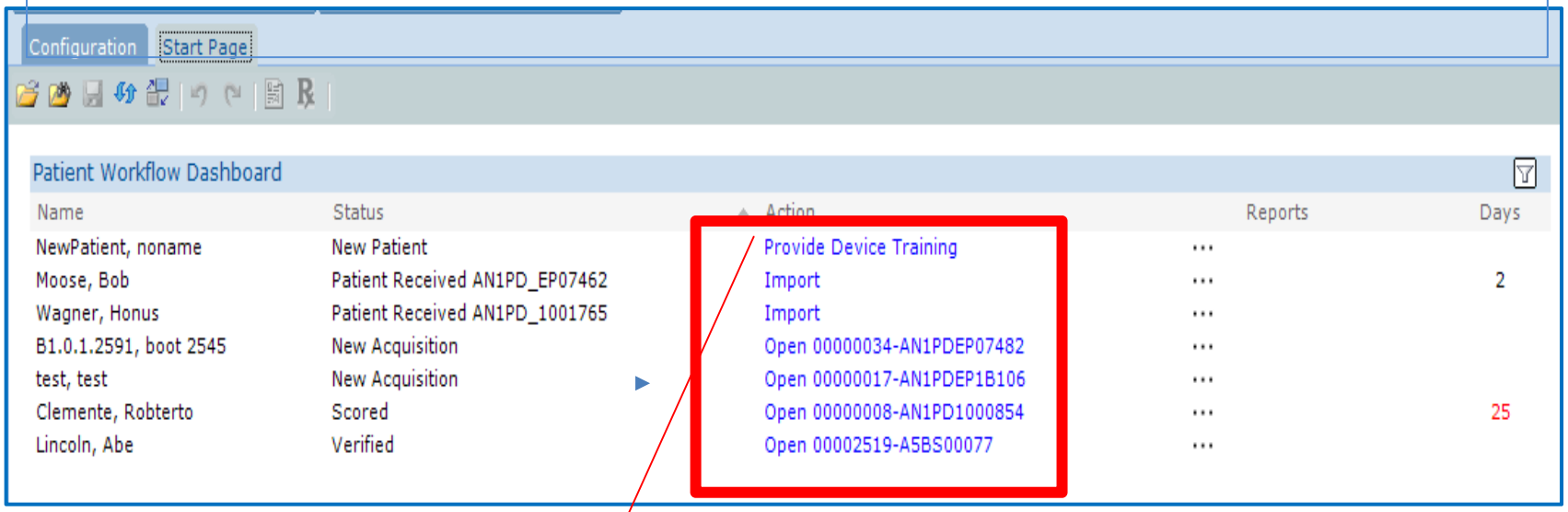
In the next few slides we will initiate each task to outline the stages of the workflow process for portable testing.

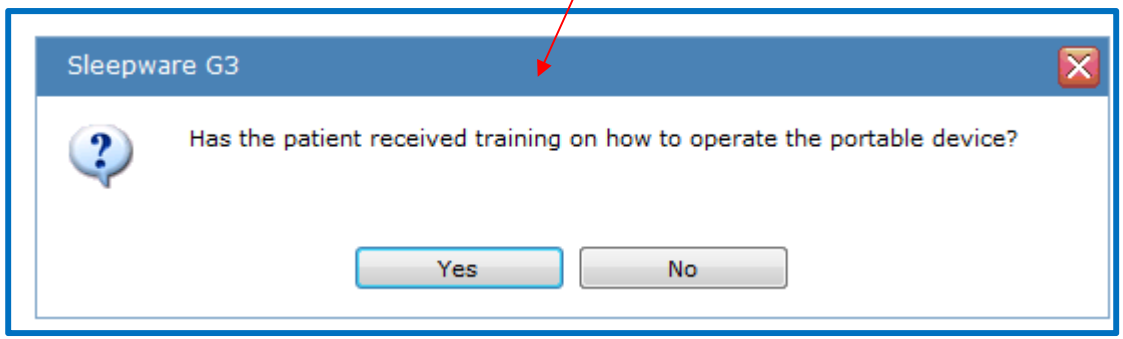
PHILIPS

Patient and Device Workflow Dashboard

Step 1:
Select Provide Device Training in the Action column. A dialog box appears asking "Has the patient received training on how to operate the portable device?"

If Yes is selected, the Action then automatically changes to "**Configure Device**," which is the next step in the process. The Status column automatically changes to "Received Device Training." If No is selected, the current action and status will remain.





PHILIPS

Patient and Device Workflow Dashboard

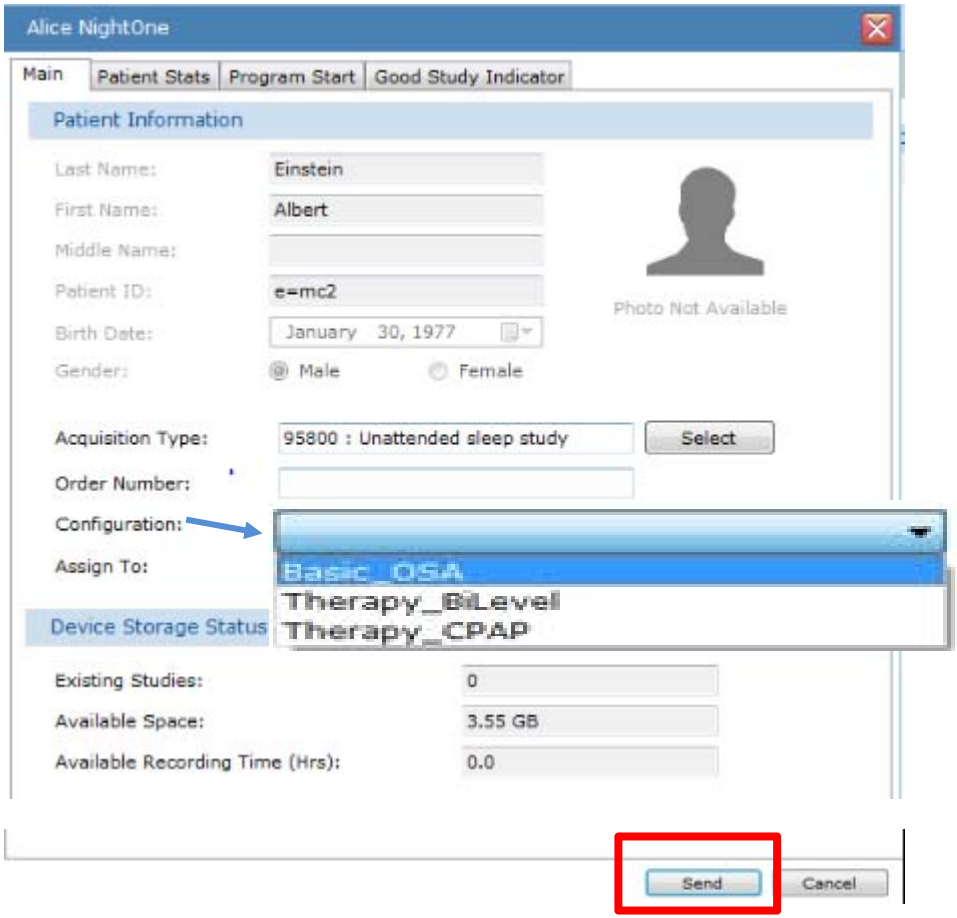
Step 2: Configure Device

The next step is to select the Action “Configure Device.” Once Configure Device is selected, this message appears: “Please connect the device to the host machine.”

PHILIPS

Portable Device Manager Tools

Configure the device.

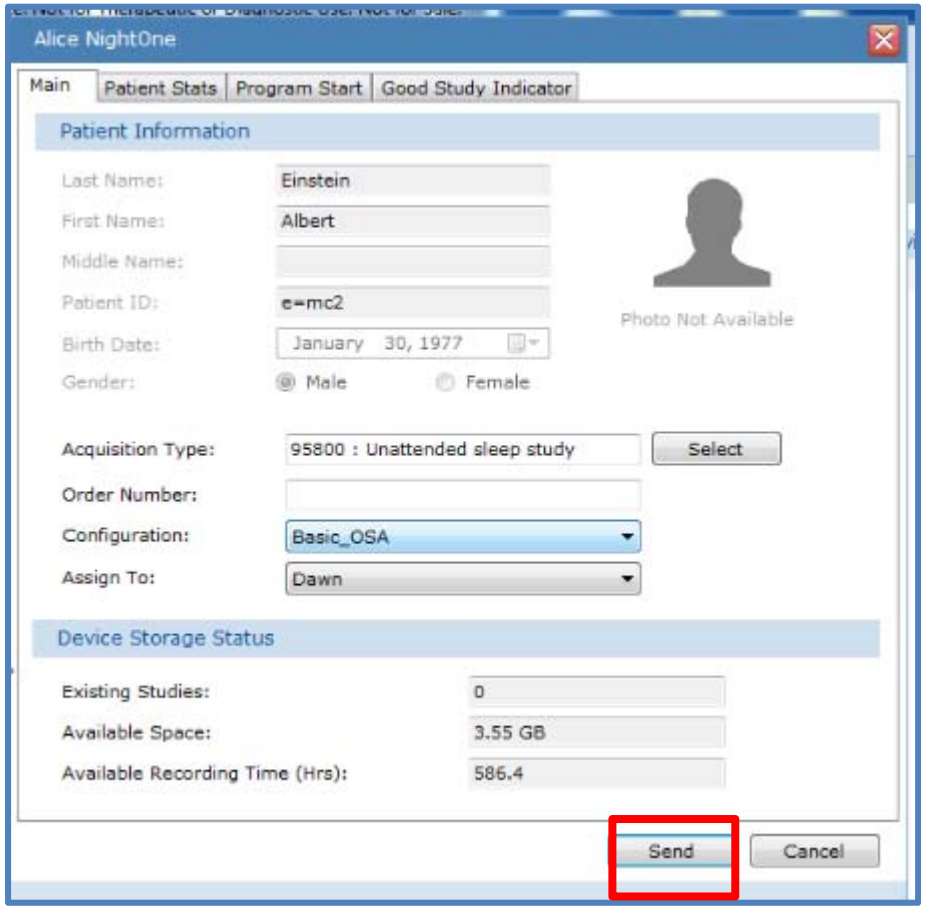


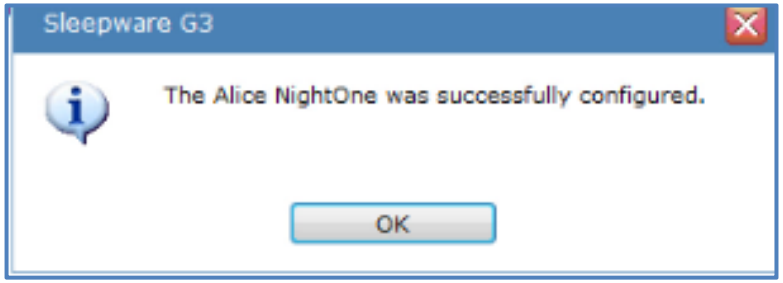
Once the portable device is connected, The Alice NightOne Configuration Page appears. Enter the patient information, desired device settings, and select the configuration. In this example, we selected **Basic_OSA configuration**

Select **Send** to complete.

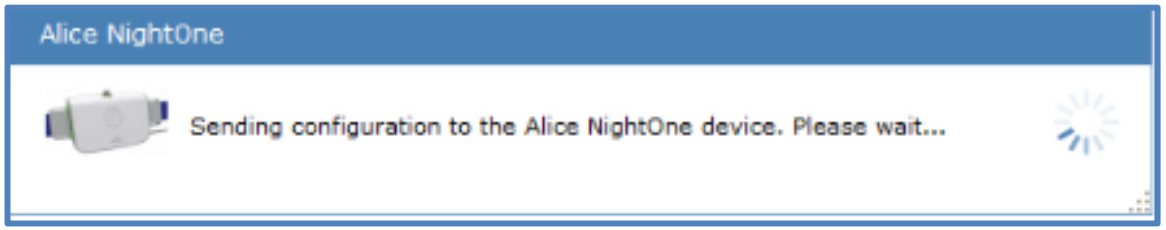
PHILIPS

Portable Device Manager Tools



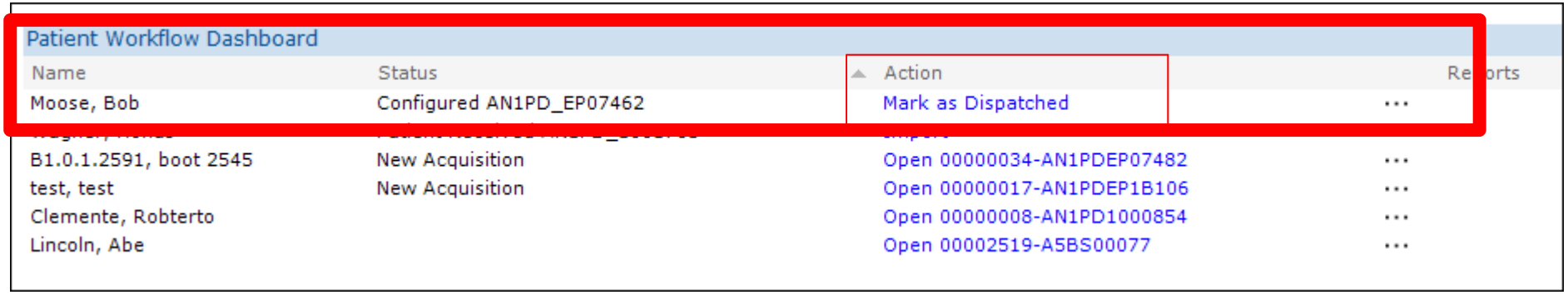


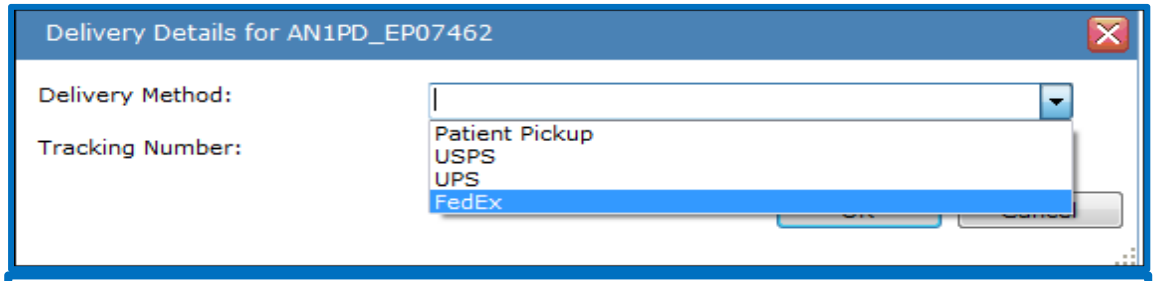
After selecting Send, a status message appears to say the configuration is being sent. This is followed by a message confirming that the device has been successfully configured.

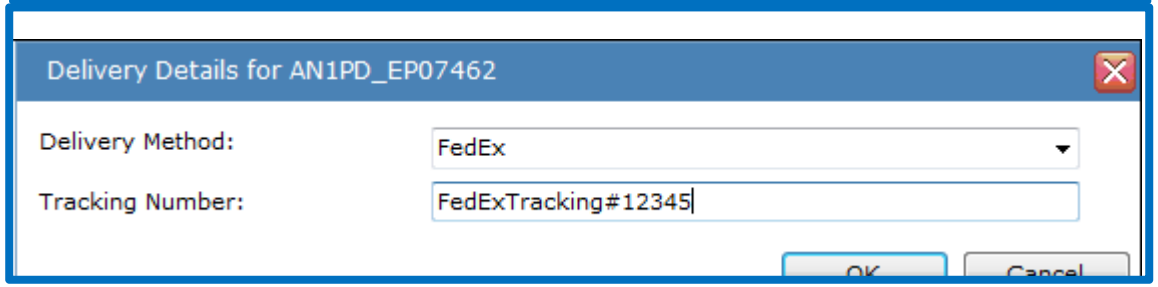


PHILIPS

Device and Patient Dashboard





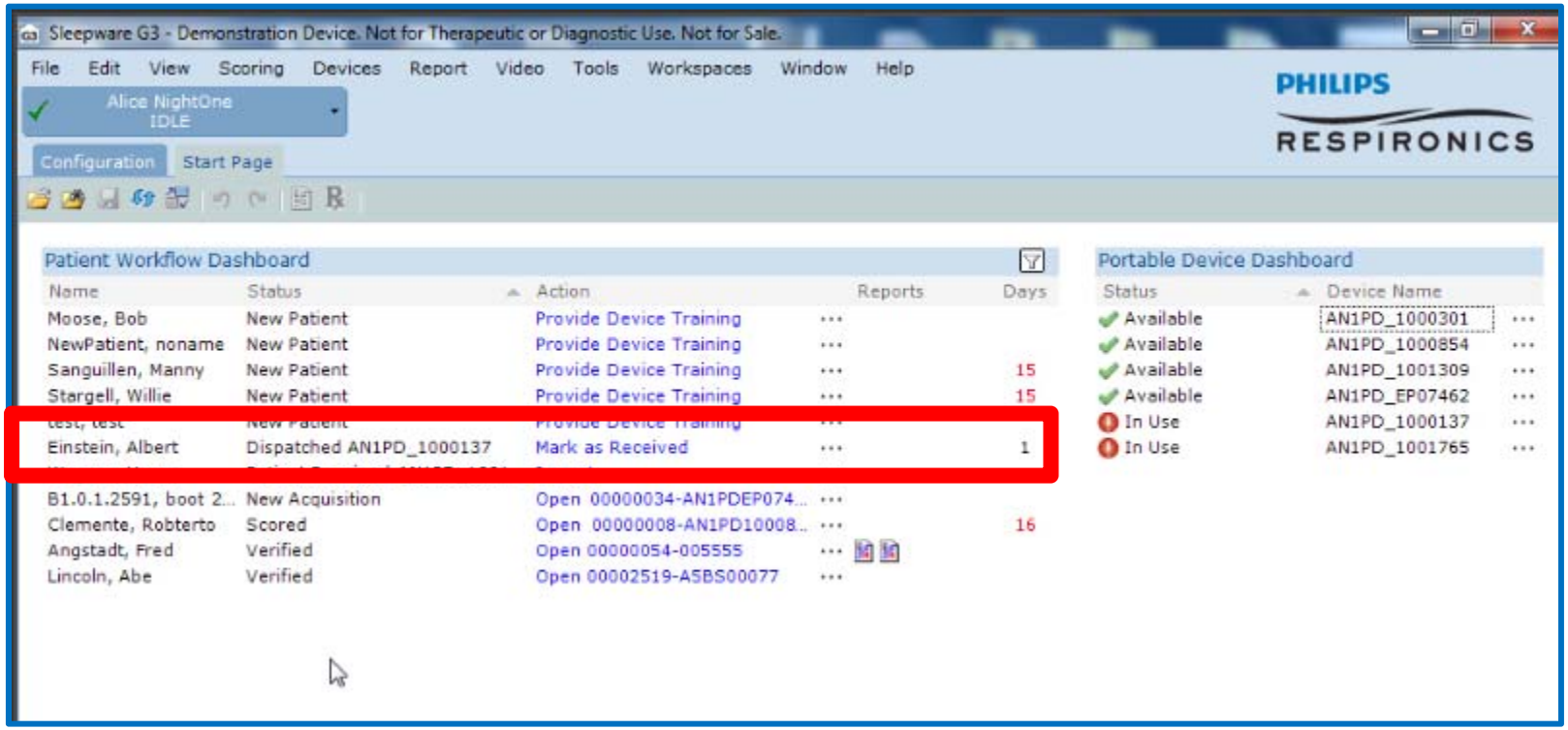


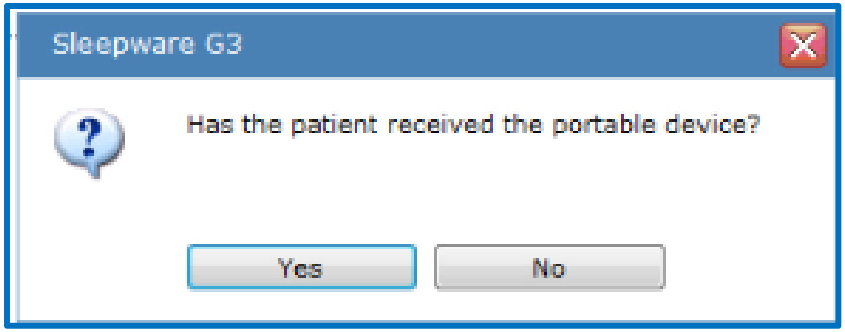
The next action in the workflow is to "Mark as Dispatched." Once selected, the Delivery Details box appears. Use the drop-down to select a delivery option. If using USPS, UPS, or FedEx, you can then add the tracking number.

**The tracking number will not link to the website for the corresponding delivery company to follow delivery status. This space is for reference only.

PHILIPS

Device and Patient Dashboard



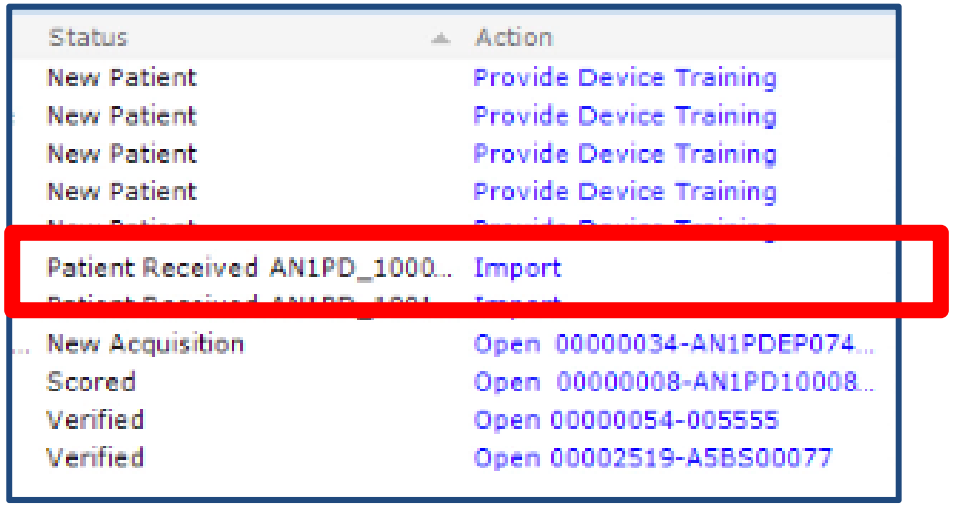


The next Action will be “Mark as Received.” The status will be “Dispatched.” Once it is confirmed that the patient received the device, click on “Mark as received.” The message at left is displayed. Select Yes to advance to the next level. (If No is selected, the action and status remain the same.)

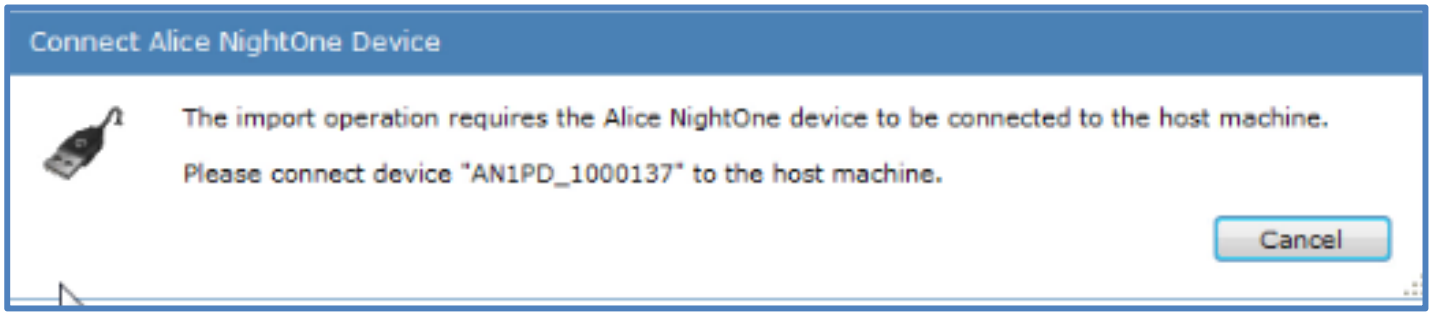
PHILIPS

Device and Patient Dashboard

The Action column will be set to “Import” for the device data once the patient returns the device.



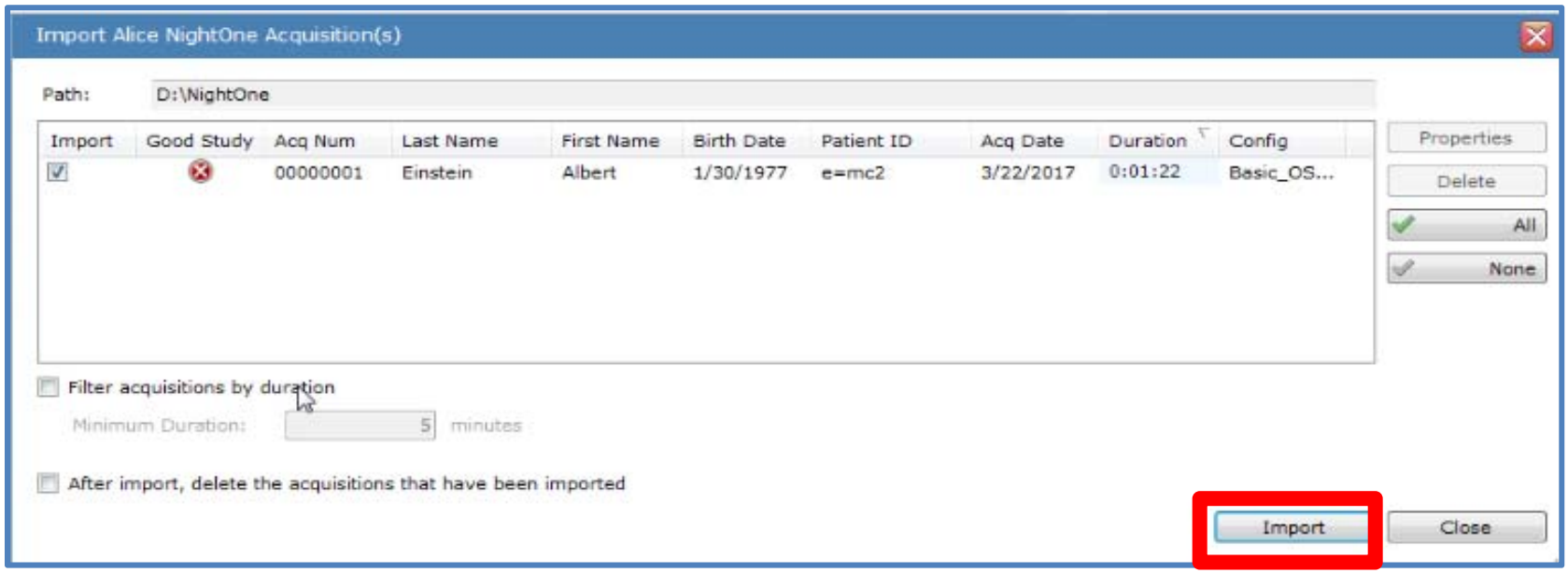
Once “Import” is selected, the Alice NightOne device Must be connected to the PC, if it has not been already.



PHILIPS

Device and Patient Dashboard

Device Import: Once “Import” is selected, the Alice NightOne device will need to be connected to the PC. Once connected the device will enter the download mode and the “Import Alice NightOne Acquisition(s) box appears. Import the study.

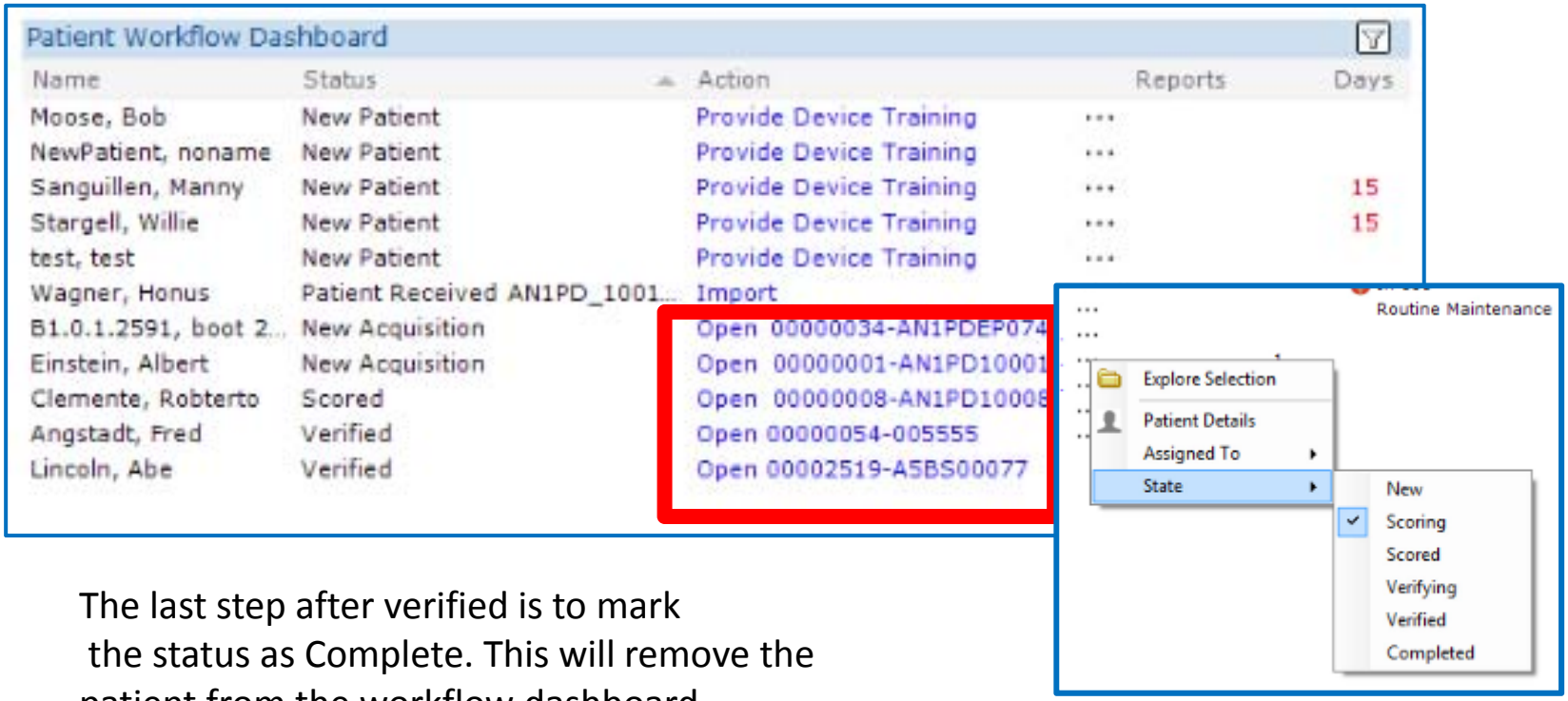


PHILIPS

Importing data

Once the data is imported, the status of the acquisition changes to “New Acquisition” and the Action changes to “**Open”** letting you know the sleep study is ready for scoring and interpretation.

The Action status for imported acquisitions will remain as “Open” for all status changes that attribute to managing a sleep study state, such as Scoring, Scored, Verifying, and Verified.



The last step after verified is to mark the status as Complete. This will remove the patient from the workflow dashboard.

PHILIPS

The Patient and Device Workflow Dashboard

The Status and Action columns for patient workflow, and the status column for devices correspond with one another through each step of the patient and device workflow.
*The table below considers *one* patient entering the workflow and is assigned to *Device 1*.

The in-use indicators in the patient workflow Status column, such as Configured, Dispatched, and Patient Received device, appear as “In Use” for status in the Portable Device Status column.

Patient Workflow Dashboard		Portable Device Dashboard	
Status	**Action**	**Status**	**Device Name**
New Patient	Provide Device Training	Available	Device 1
Received Device Training	Configure Device	Available	Device 1
Configured	Mark as Dispatched	In Use	Device 1
Dispatched	Mark as Received	In Use	Device 1
Patient Received	Import	In Use	Device 1
New Acquisition	Open…	Returned > Available	Device 1
Scoring, Scored, Verifying, Verified	Open…	Available	Device 1
Completed	Removes patient from the list	Available	Device 1

PHILIPS

The Patient and Device Workflow Dashboard

Once a device is returned and the study imported, the device status changes to Returned. You must click on “Returned” in order to advance to the next state. If you had set up a custom state such as “Device cleaning” then this state will appear next in the Workflow. If additional custom states have not been created, the status will change to “Available.”

Patient Workflow Dashboard		Portable Device Dashboard	
Status	**Action**	**Status**	**Device Name**
New Patient	Provide Device Training	Available	Device 1
Received Device Training	Configure Device	Available	Device 1
Configured	Mark as Dispatched	In Use	Device 1
Dispatched	Mark as Received	In Use	Device 1
Patient Received	Import	In Use	Device 1
New Acquisition	Open…	Returned > Available	Device 1
Scoring, Scored, Verifying, Verified	Open…	Available	Device 1
Completed	Removes patient from the list	Available	Device 1

PHILIPS

Portable Device Manager

Portable Device and Patient Dashboard

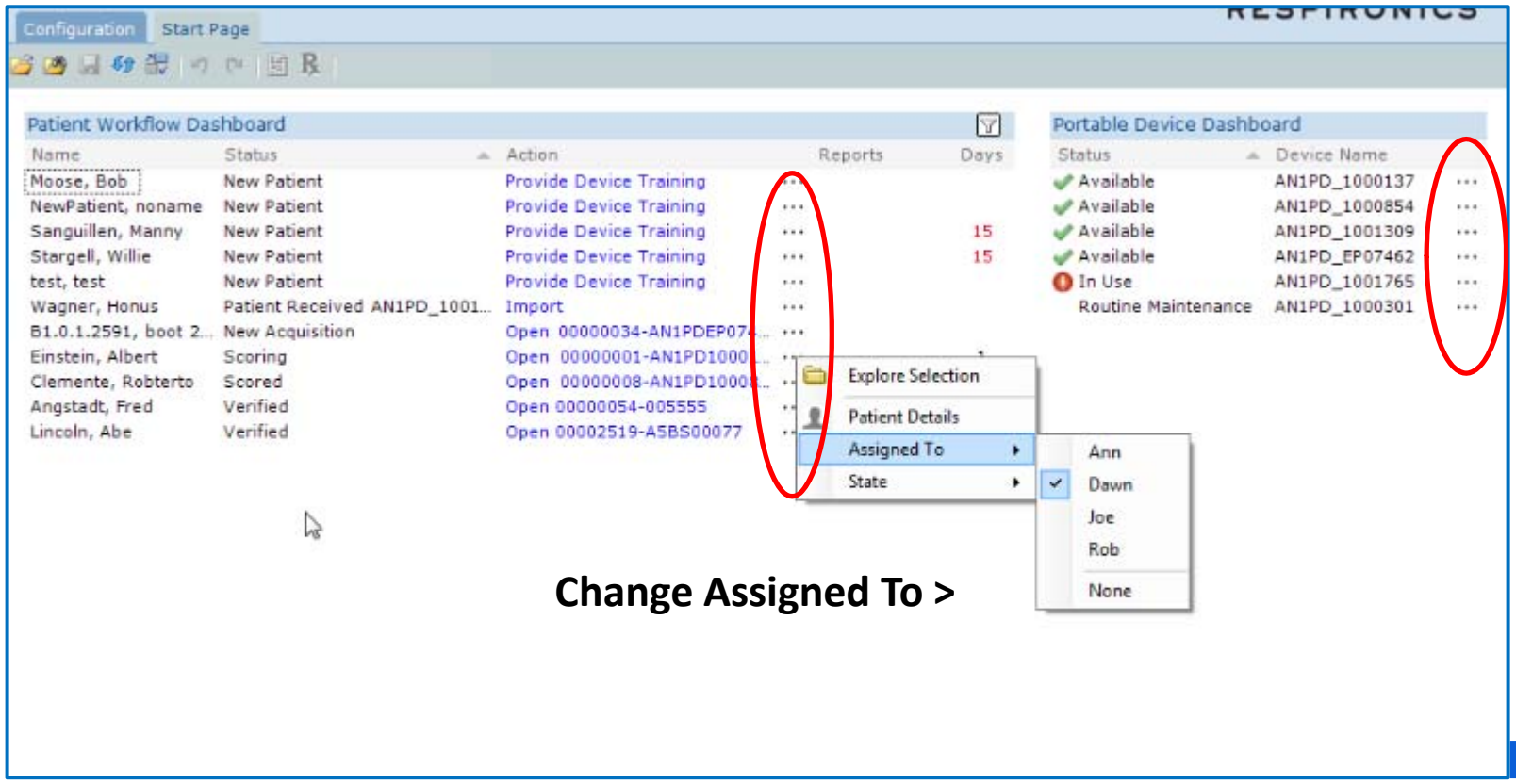
The Ellipses Column explained

PHILIPS

Device and Patient Dashboards: **Ellipses**

Additional actions for the patient and device workflow are available on the dashboard by clicking on the Ellipses (. . .) column for the corresponding patient.

In the next few slides, we will cover what can be found by selecting the ellipses during various stages of the workflow cycle for both the patient and the device i.e., when the device is In Use and Available.

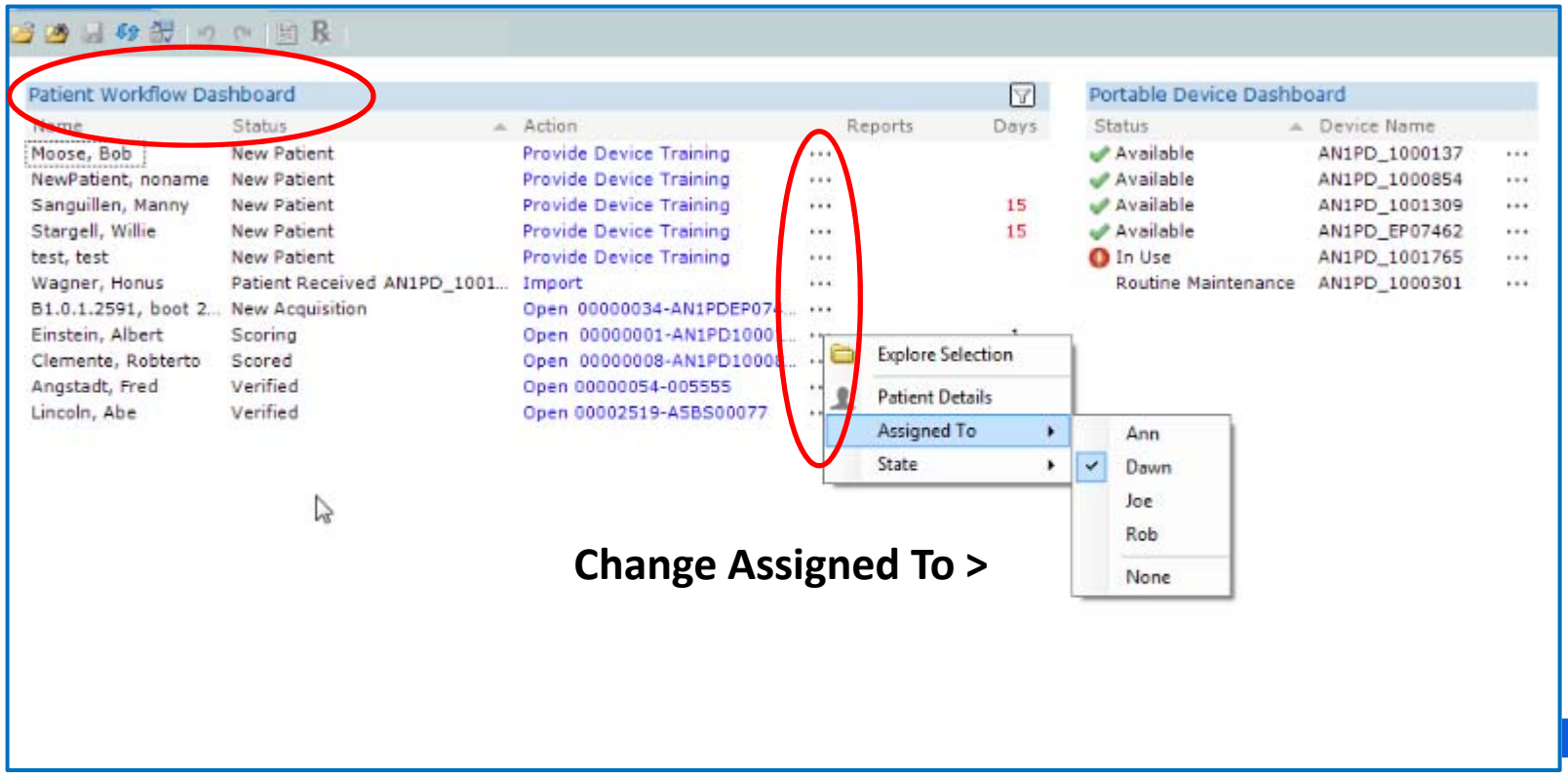


Change Assigned To >

Patient Dashboard: **Ellipses**

For a study that has been imported:

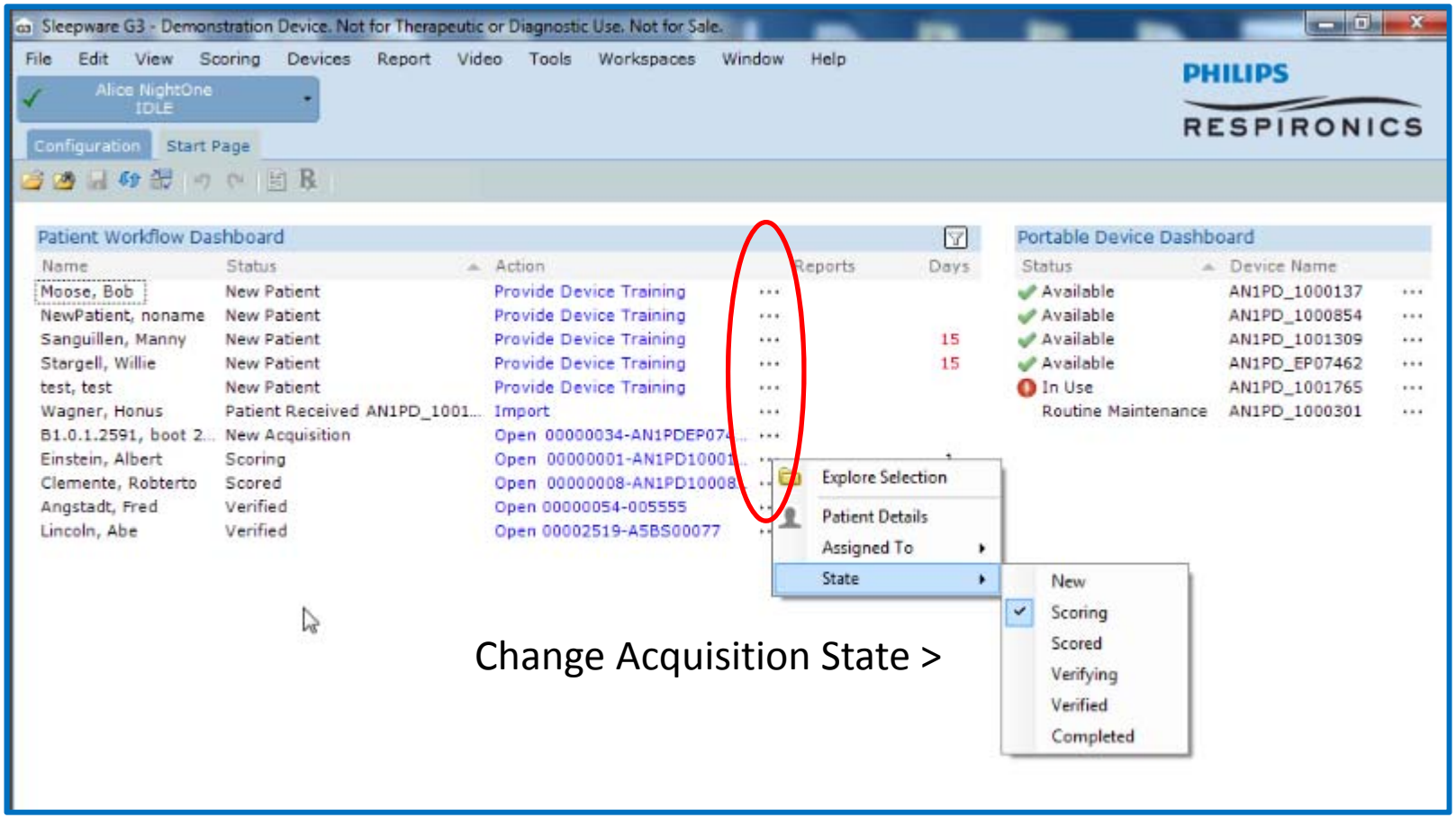
Once the acquisition is imported and ready for scoring, the **Ellipses** (…) column is accessed by clicking on the three dots for the patient whose information you'd like to view. For this situation, the ellipses allow you to quickly view all files associated with the patient record (Explore Selection), view patient details, change who the study is assigned to, and last, allows you to change the state of a study.



Patient and Devices Start Page
Patient Dashboard Ellipses

For an acquisition that has been imported:

Changing acquisition state: Left-click on the ellipses (…) and select State from the drop-down menu.



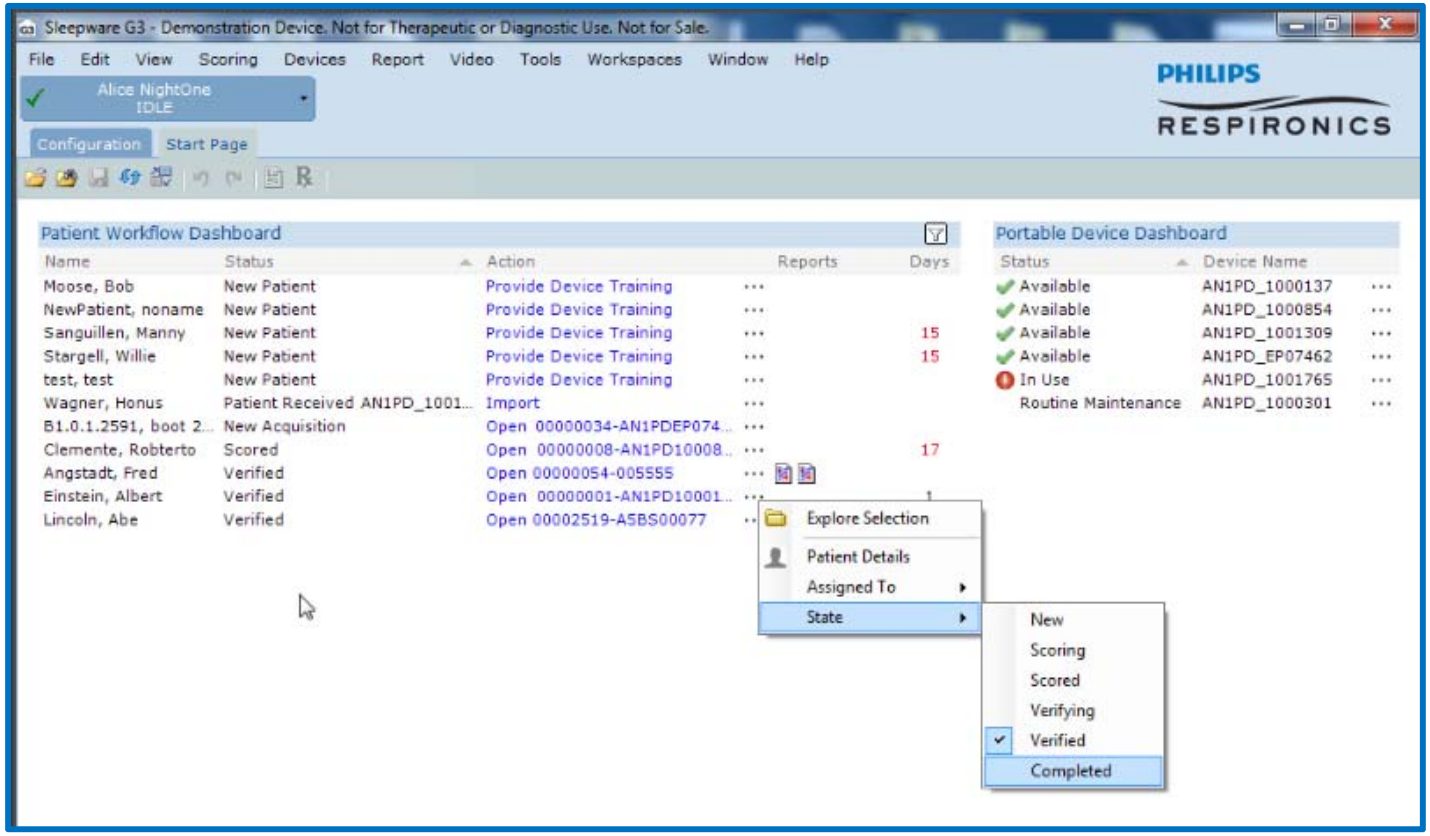
Change Acquisition State >

PHILIPS

Patient and Devices Start Page
Patient Dashboard

Upon completion of the workflow process:

Changing acquisition state to complete: Left-click on the ellipses (…) and select State > Completed from the drop-down menu.

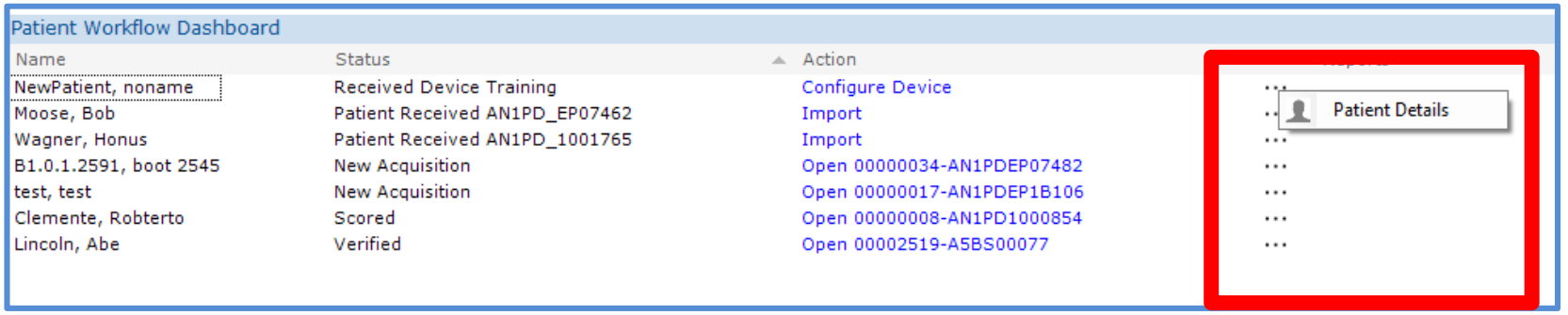


Changing a status to the Completed state will remove a study from the list.

PHILIPS

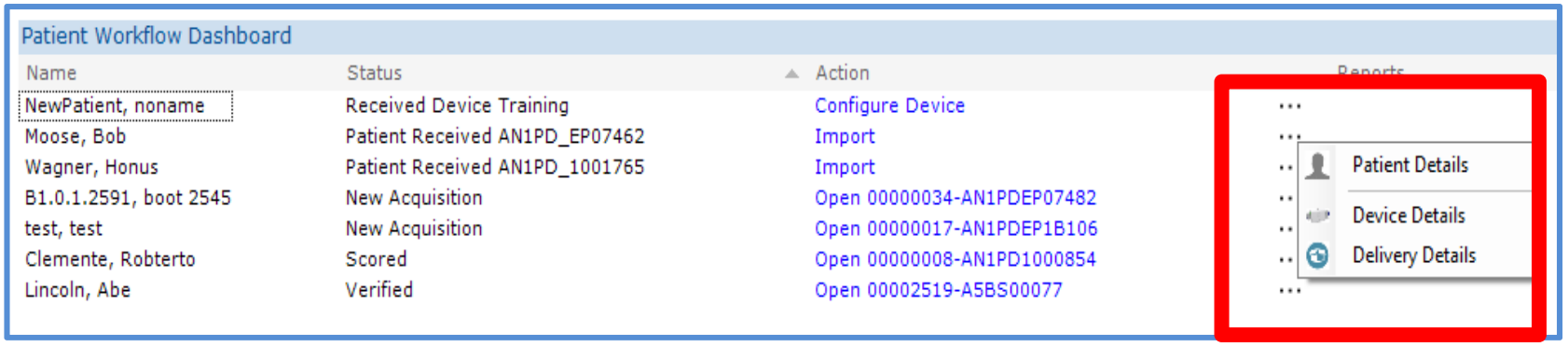
Patient and Devices Start Page
Patient Dashboard

Ellipses for a new patient who has not been assigned a device: Only the ability to view “Patient Details” is available when accessing the ellipses for a patient who has not been assigned a device.



Ellipses for a patient who has been assigned a device:

The ability to view Patient Details, Device Details, and Delivery Details is available when accessing the ellipses for a patient who has been assigned a device.



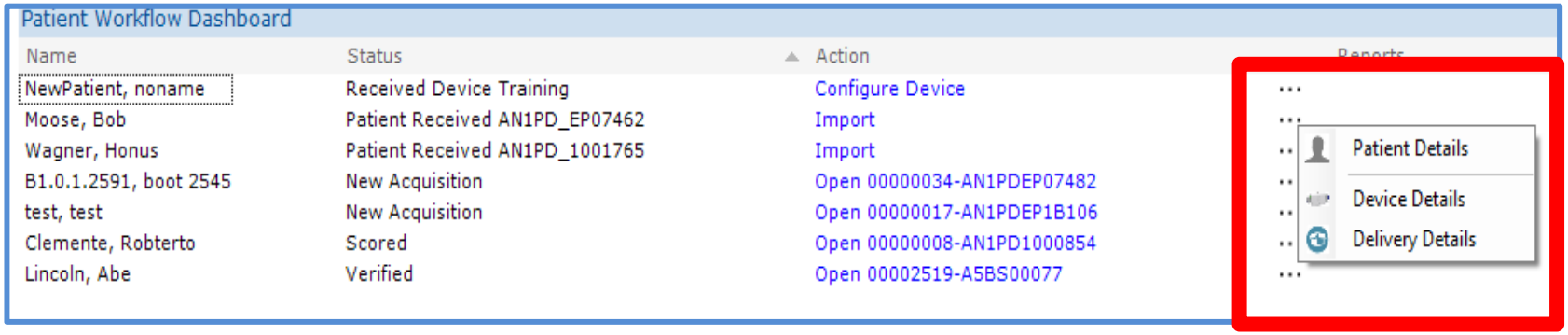
PHILIPS

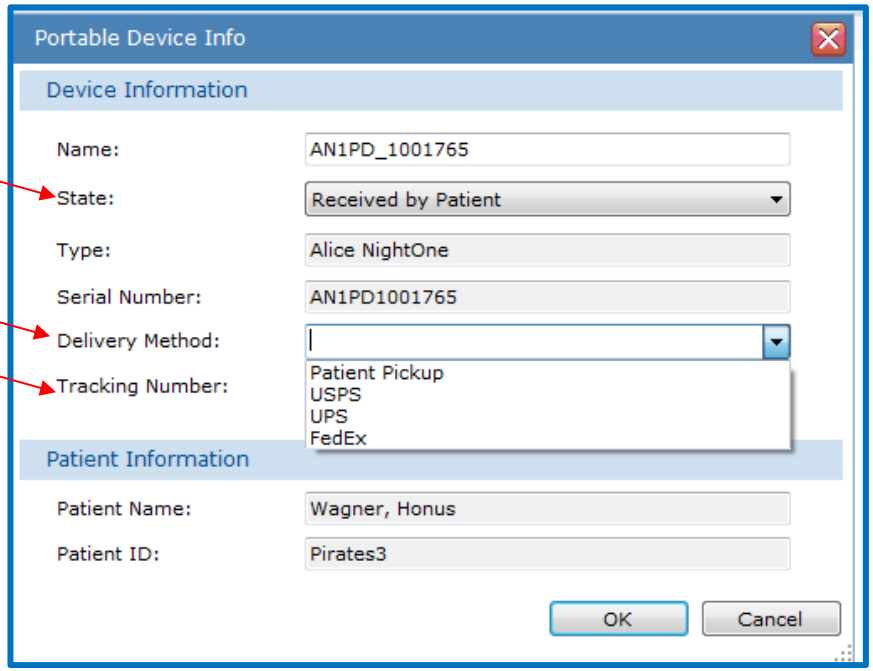
Patient and Devices Start Page

Patient Dashboard

Ellipses for a patient who has been assigned a device:

Selecting Device Details allows you to view the state of the device as well as offer the ability to add delivery method information such as Patient Pickup, USPS, UPS and FedEx. You can also add a tracking number if applicable.





PHILIPS

Patient and Devices Start Page
Portable Device Dashboard Section

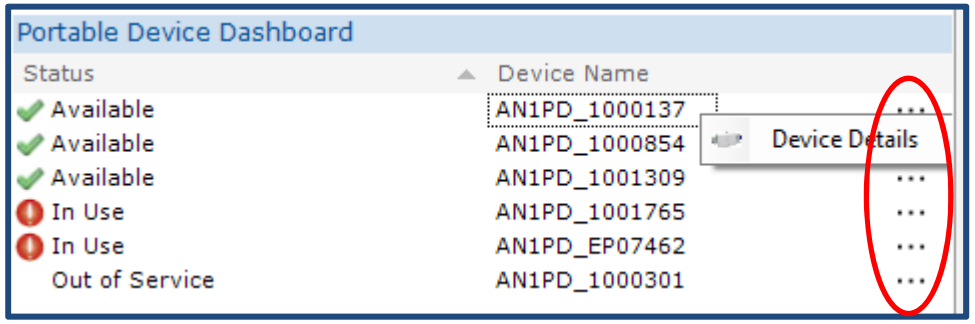
Shows the state of the device, if it's available, in use, or assigned one of the non-usage states.

The ellipses (…) can provide additional details for the device and/or patient depending on the status.

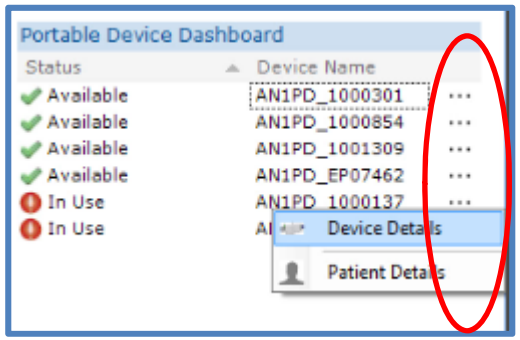
PHILIPS

Patient and Devices Start Page

Ellipses Actions for Portable Device Dashboard



If a device is available, only the device details are visible.

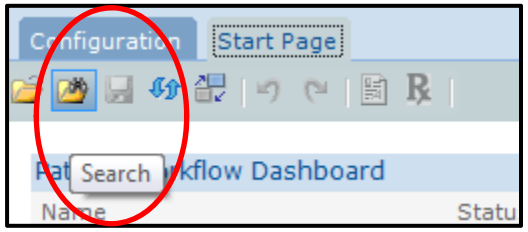


If a device is in use, both device details and patient details are available to view via the ellipses.

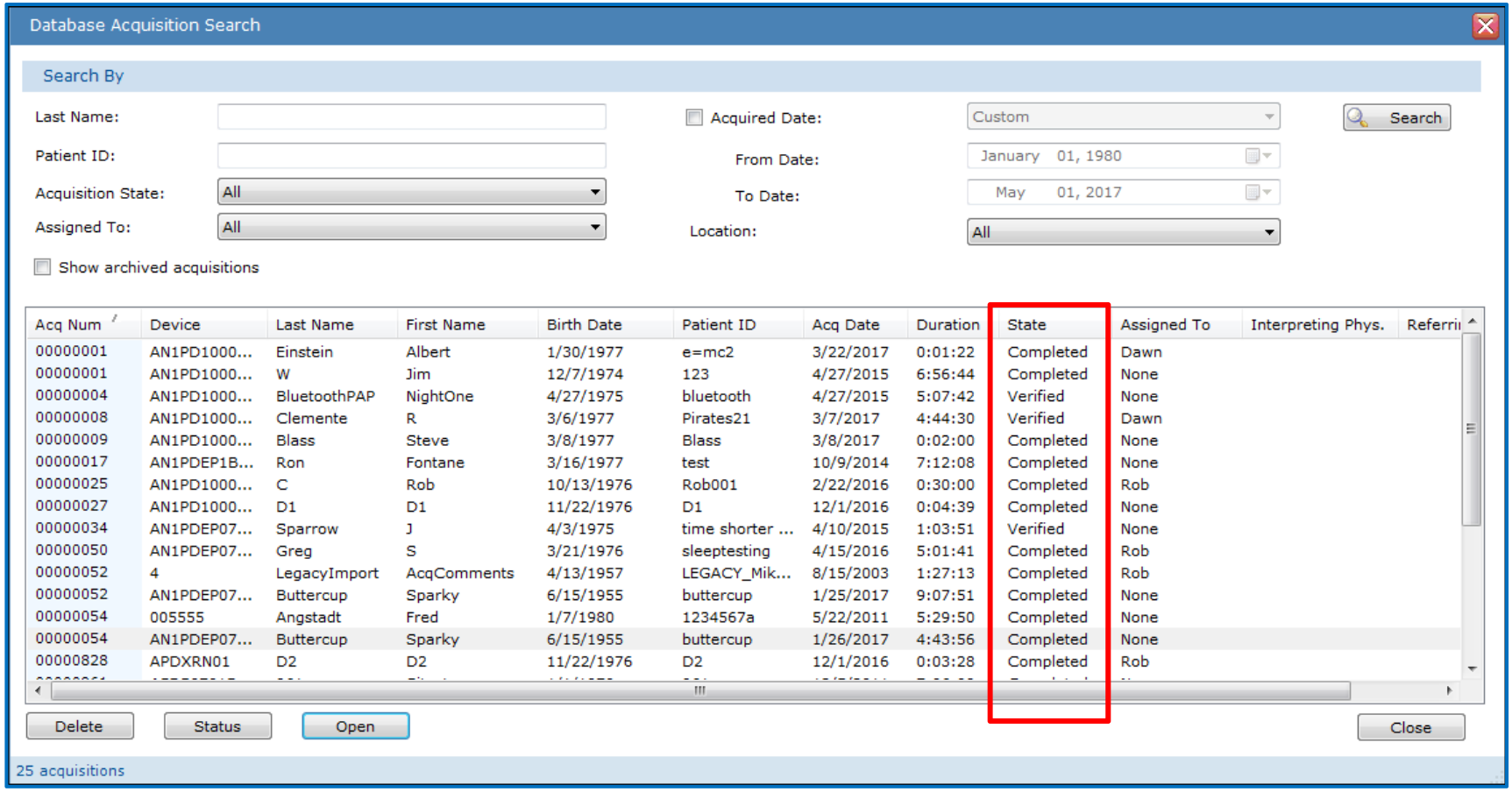
PHILIPS

Tip:
Changing the state of several studies to “Complete” at once

PHILIPS



To remove patients from the Device and Patient Workflow Dashboard Start Page, you must mark the study status as Completed. It is possible to change the status for multiple studies through the Database Acquisition Search Utility. To access, select the Search folder on the Sleepware G3 toolbar.



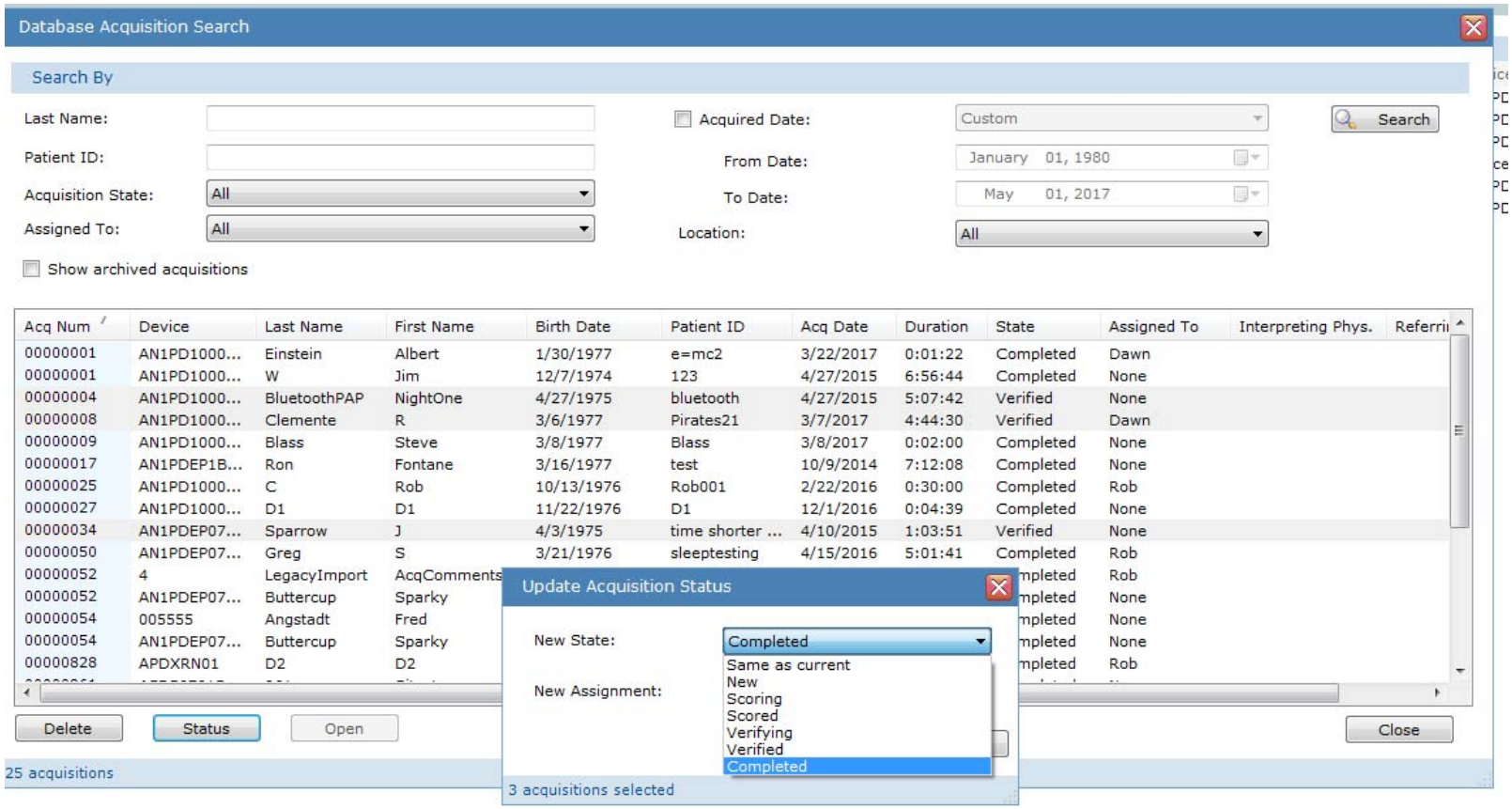
**Note: It is recommended that studies be removed from the Patient and Device Dashboard Workflow Start Page as they are completed so that Sleepware G3 performs optimally and is not bogged down by excess data to load.
If you wish to avoid managing patients on the dashboard altogether, you must select “None” under the General tab when adding a patient to Sleepware G3. (From the main toolbar select Tools > Patient List > Add > General).

PHILIPS

Changing study status to Completed for multiple studies:

Select all of the studies whose status you would like to change to Completed by left-clicking on the first one on the list to highlight it, and then holding the **Ctrl** key down as you select others.

Next, click on the Status button at the bottom of the page, choose the Completed status from the drop-down, and then select OK.

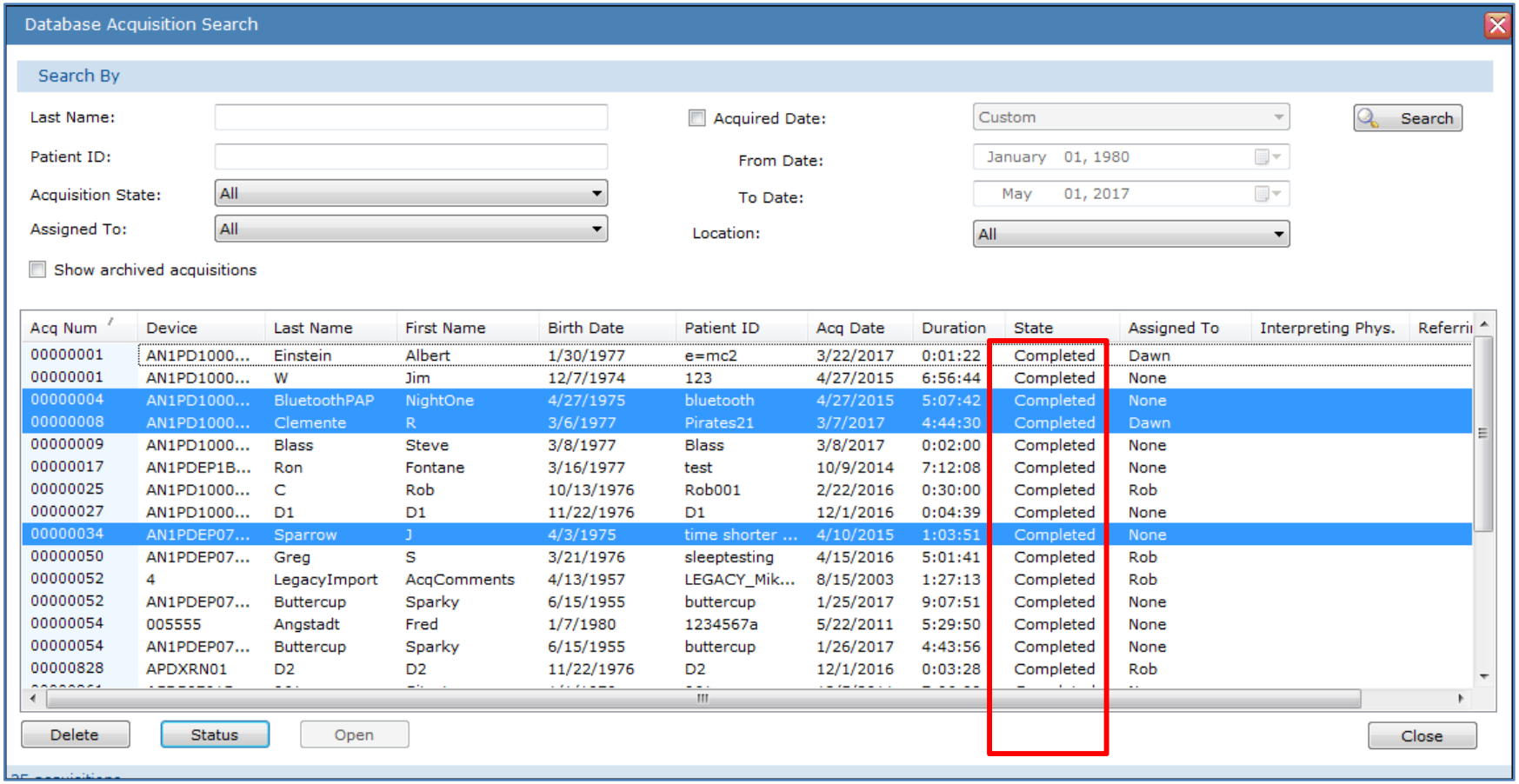


**Note: It is recommended that studies be removed from the Patient and Device Dashboard Workflow Start Page as they are completed so that Sleepware G3 performs optimally and is not bogged down by excess data to load.
If you wish to avoid managing patients on the dashboard altogether, you must select “None” under the General Tab when adding a patient to Sleepware G3. (From the main toolbar select Tools > Patient List > Add > General.)

PHILIPS

Changing study status to Completed for multiple studies

The study Status will change to “Completed.” The selected studies will no longer appear on the Patient and Device Dashboard Workflow Start Page.



**Note: It is recommended that studies be removed from the Patient and Device Dashboard Workflow Start Page as they are completed so that Sleepware G3 performs optimally and is not bogged down by excess data to load.
If you wish to avoid managing patients on the dashboard altogether, you must select “None” under the General Tab when adding a patient to Sleepware G3. (From the main toolbar select Tools > Patient List > Add > General.)

PHILIPS

Thank You

Note: Screenshots are from the Sleepware G3 software and may differ from your version of Sleepware.
Disclaimer: Screenshots may change based on software version.

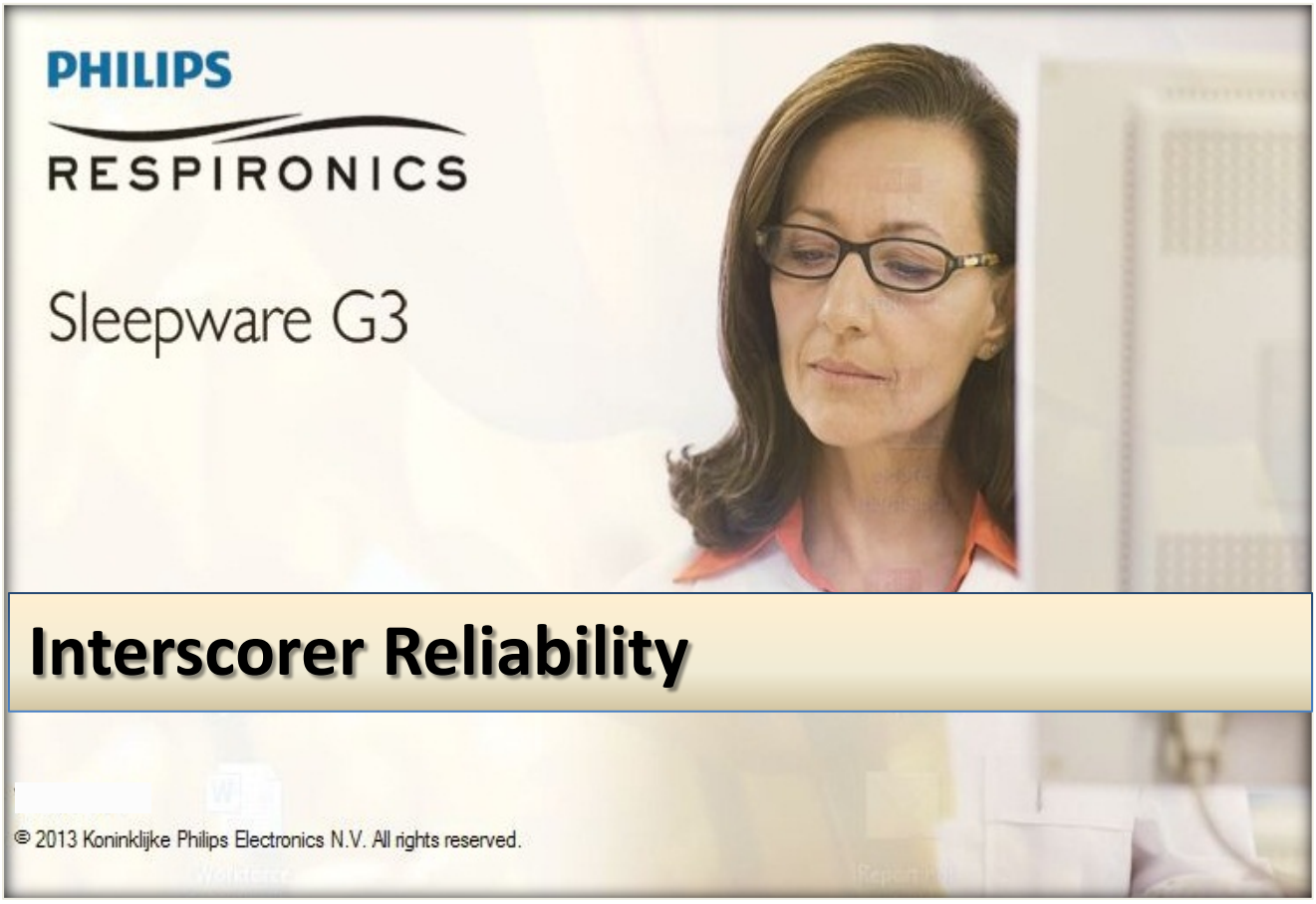
Consult Sleepware G3's online help for additional information.

1134645 R00
RPM 05/08/2017

PHILIPS

sense and simplicity

G3 Training Module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RESPIRONICS
Sleepware G3
Interscorer Reliability
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Inter-Scorer Reliability

The Inter-Scorer Reliability (ISR) System is a tool that allows sleep labs to perform quality assurance testing on their scoring results. Separate acquisitions are created for the ISR Administrator and each of the scorers. These acquisitions are referred to as the ISR Administrator and the ISR Scorer acquisitions.

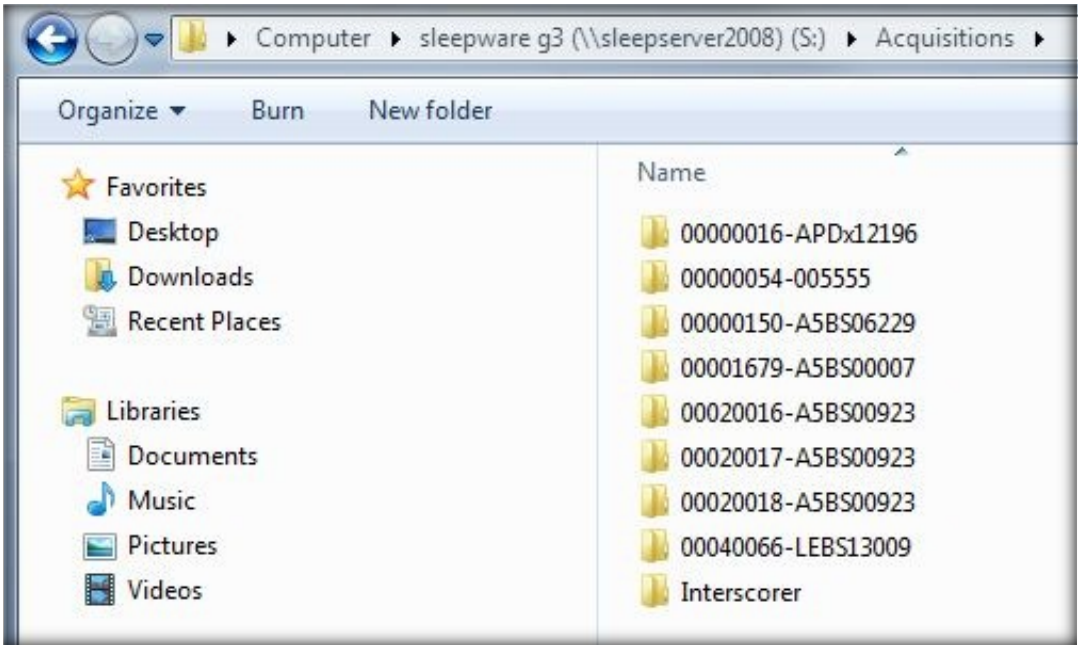
Each ISR comparison will have exactly one ISR Administrator acquisition and a separate ISR Scorer acquisition for each scorer. **The ISR acquisitions are completely separate from the original PSG acquisition that was used to create the ISR comparison. The PSG acquisition is used only during ISR setup and remains unchanged.**

- Only a user with Inter-Scorer Reliability Admin privileges can specify the setup parameters for an acquisition in Inter-Scorer Mode. ***Hint*****:** *It is best to assign only one or two people as the administrator allowing these people to have availability of specific functions in the software.*
- The Sleepware G3 database must be in use.
- The Manage Users option must be selected in the Users window.

How to Setup Inter-Scorer Location

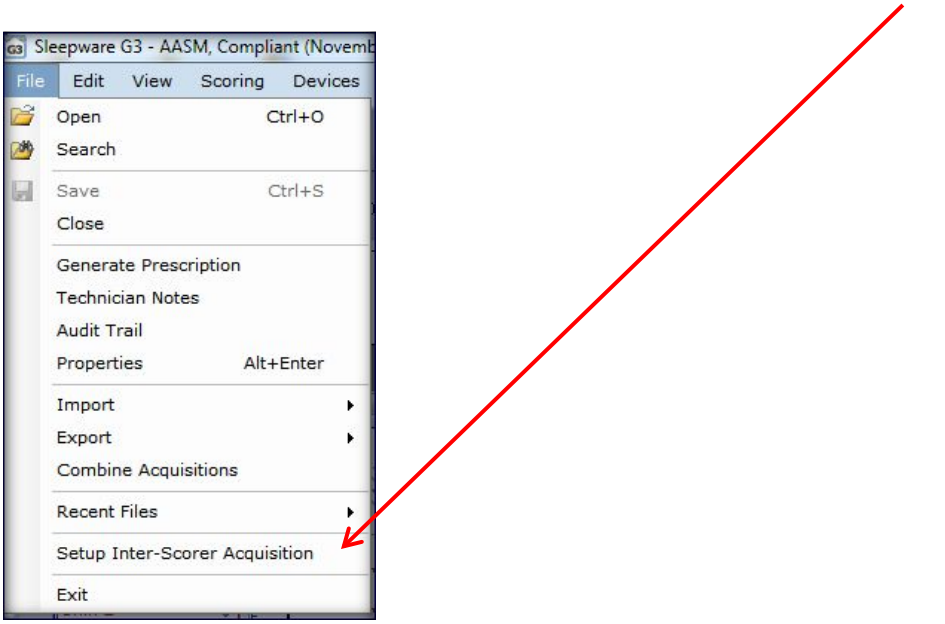
NOTE: This is for initial setup only

(Working Folder):\Acquisitions\Interscorer



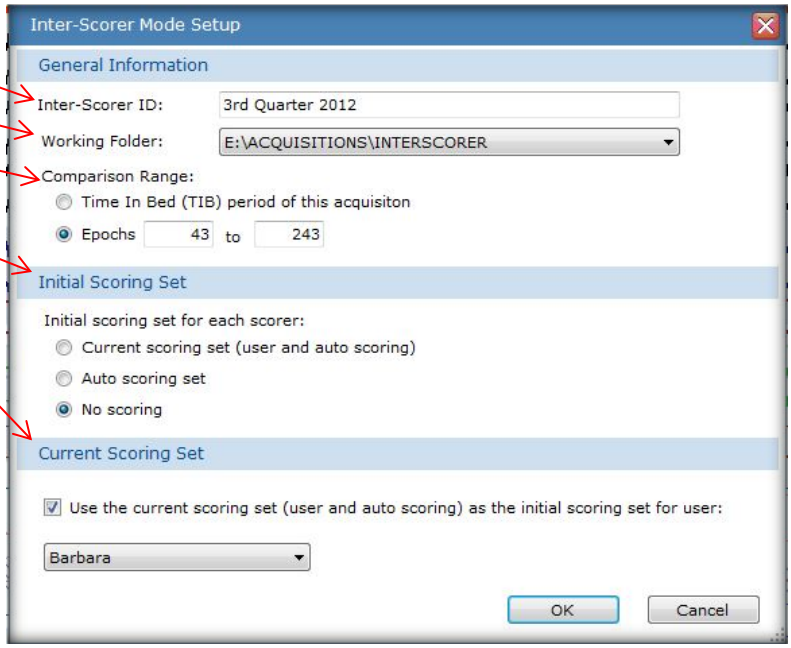
Once the Interscorer location has been setup, the Interscorer administrator needs to select the acquisition to be used for concordance. In order to begin this process, you must be the Inter-Scorer administrator and you must "manage users" (i.e., have users set up under 'users and groups' in the configuration tab).

Open the selected record and go to File > Setup Inter-Scorer Acquisition



The ISR Administrator performs all administrative operations related to the ISR comparison: Specify ISR setup parameters. The Parameters are:

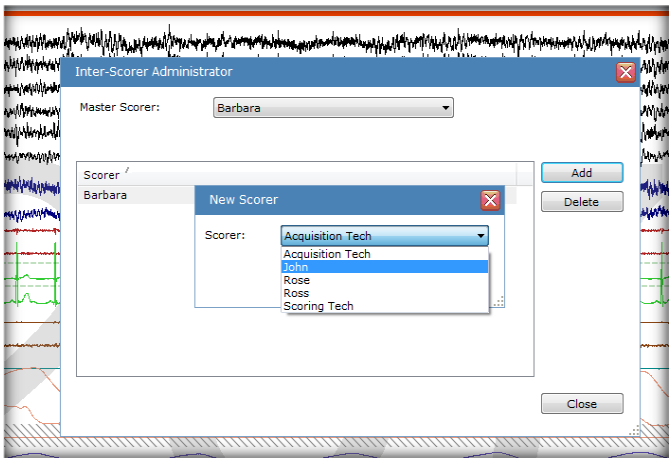
- Inter-Scorer ID
- Working Folder
- Comparison Range
- Initial Scoring Set
- Current Scoring Set



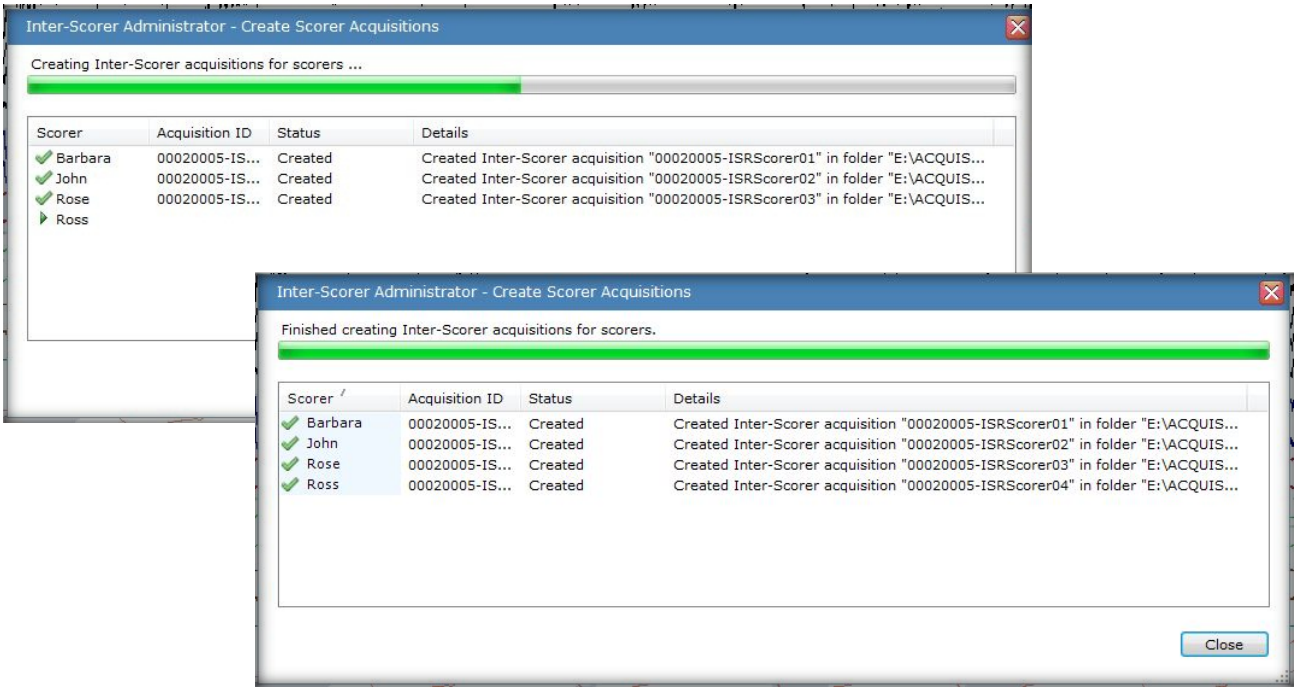
***Note**: The initial scorer does not have to be the master scorer.*

You will see the following windows as G3 creates the Inter-Scorer instance in the designated folder.

Adding Scorers

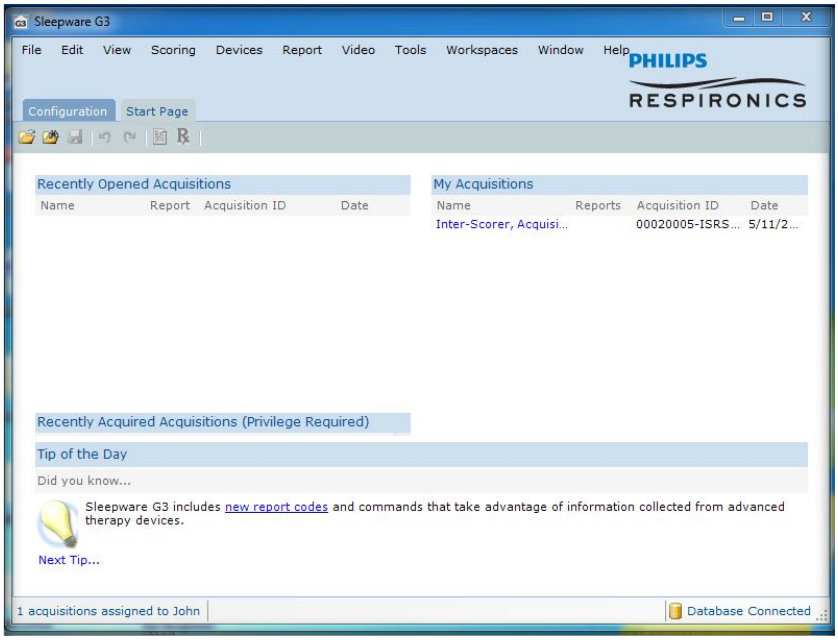


***Note*: You can add an unlimited number of scorers, but you can only compare the master scorer to 9 other scorers in a report.**



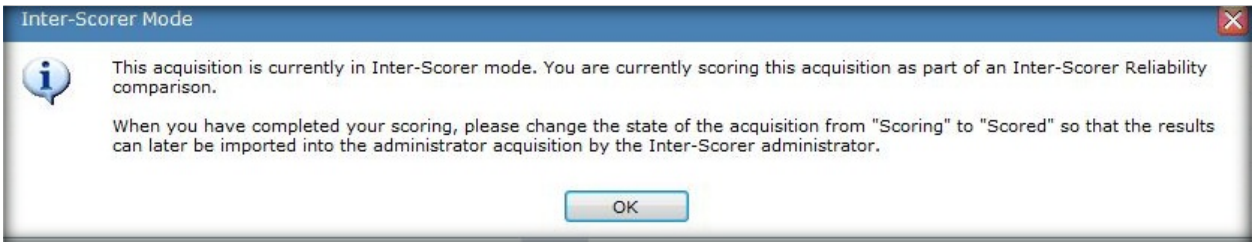
The ISR setup is complete

Upon logon, scorers will see any Inter-Scorer studies assigned under My Acquisitions.



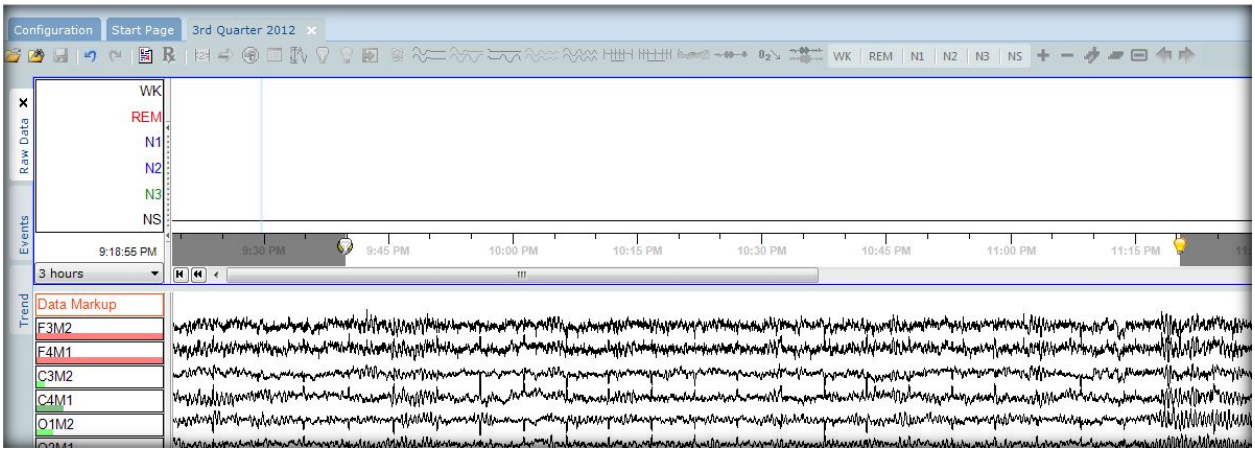
* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version

The Inter-Scorer Mode window will appear after the study has been selected.



***Note**: You cannot score the ISR admin study. You can score the ISR scorer study only.*

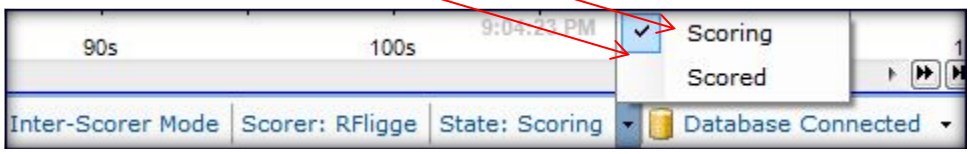
The hypnogram will demonstrate the time period (lights off to lights on) to be scored. This is determined when the study is being set up and cannot be changed.



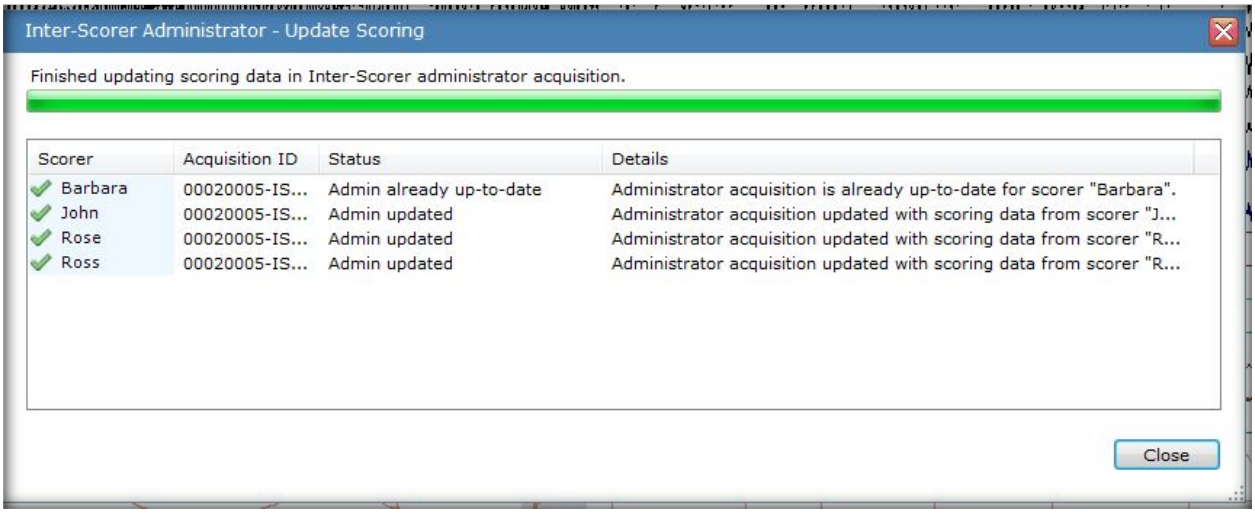
ISR acquisitions have two states:

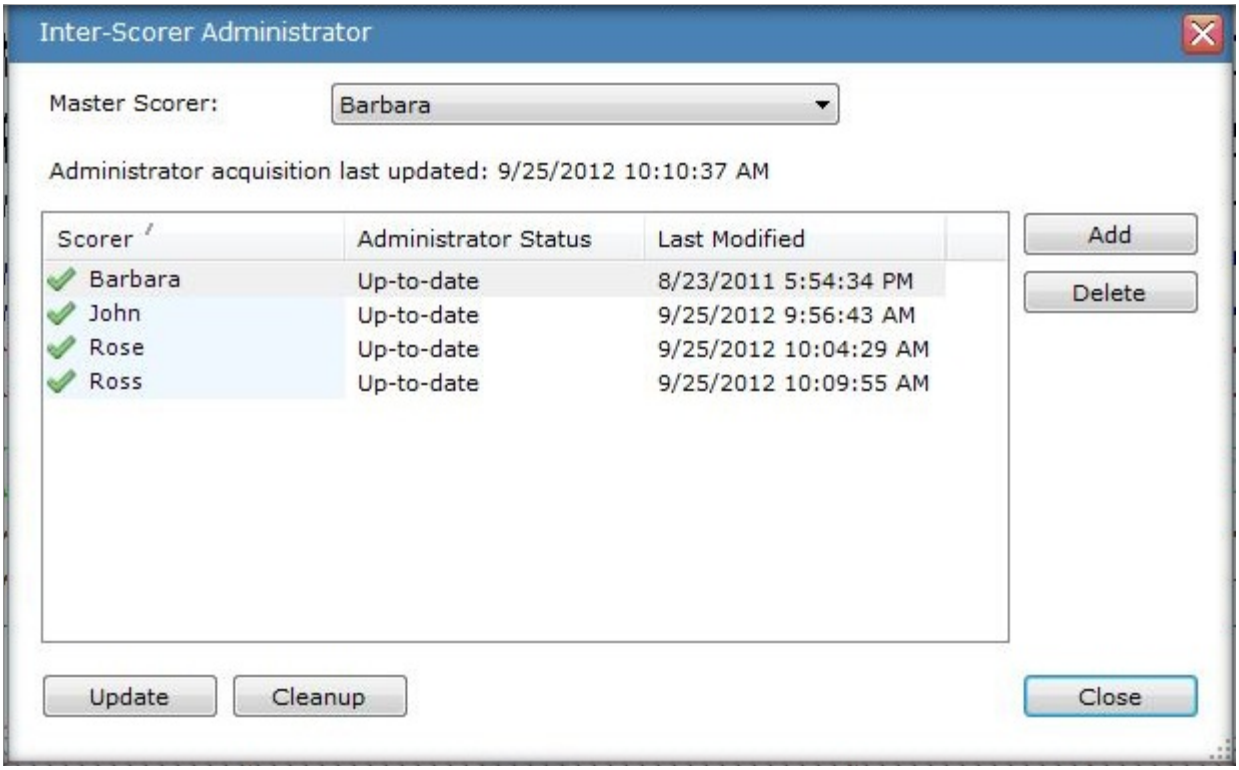
- Scoring
- Scored

<u>These states are always available</u>, <u>even if PSG states are not being managed</u>.



Note: Each scorer must change the state of their acquisition from Scoring to Scored when they have finished scoring it. If the scorers do not do this, the ISR Administrator acquisition will never be updated.





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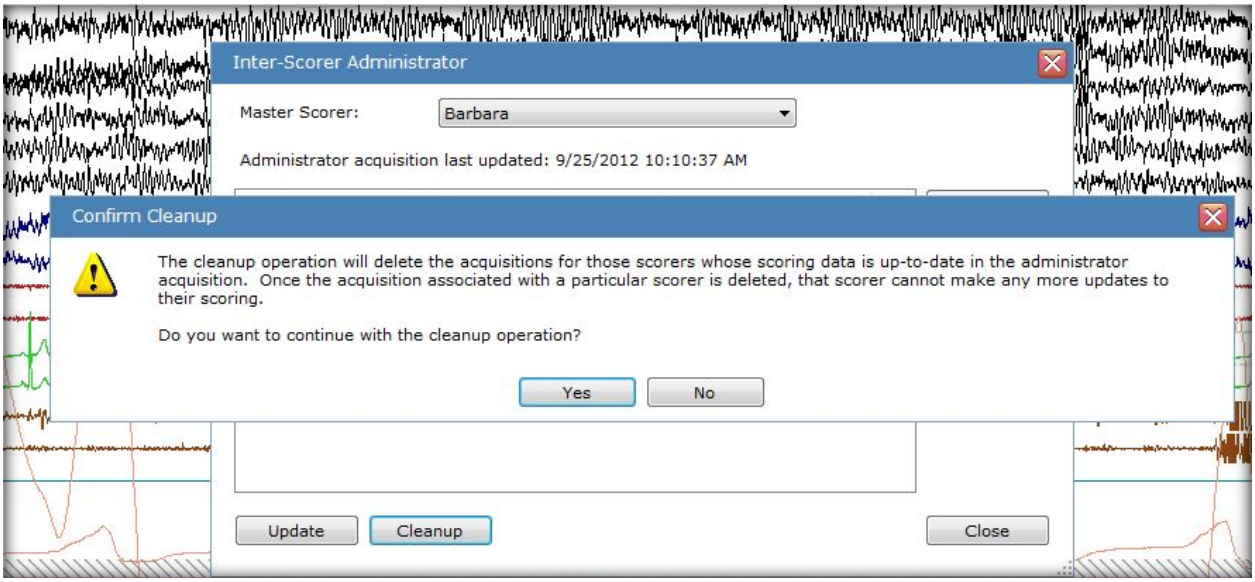
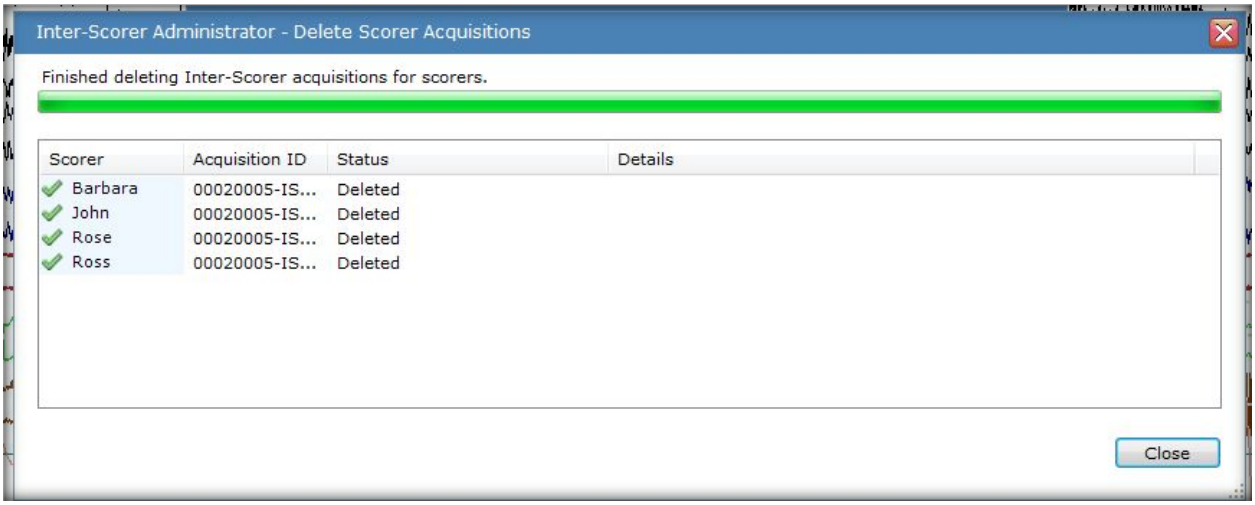
Cleanup Operations

The ISR Scorer acquisitions are intended to be temporary. A cleanup operation may be performed once the ISR report has been generated.
The cleanup operation is initiated by clicking the Cleanup button. The cleanup operation applies only to ISR Scorer acquisitions. The ISR Administrator acquisition is never deleted by a cleanup operation. The administrator acquisition can no longer be updated with newer scoring data for that scorer since that scorer no longer has an acquisition.



Clean-up is completed.



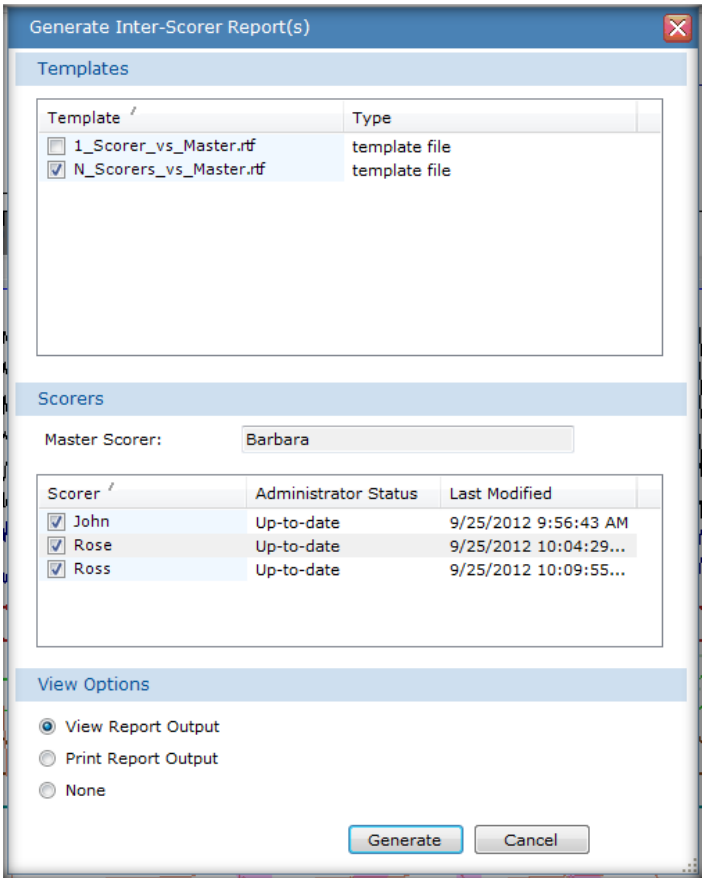
***Note**: The interscorer administrator may perform the "clean-up" function either when any one scorer has completed scoring the record, or after all scorers have finished scoring.*

PHILIPS

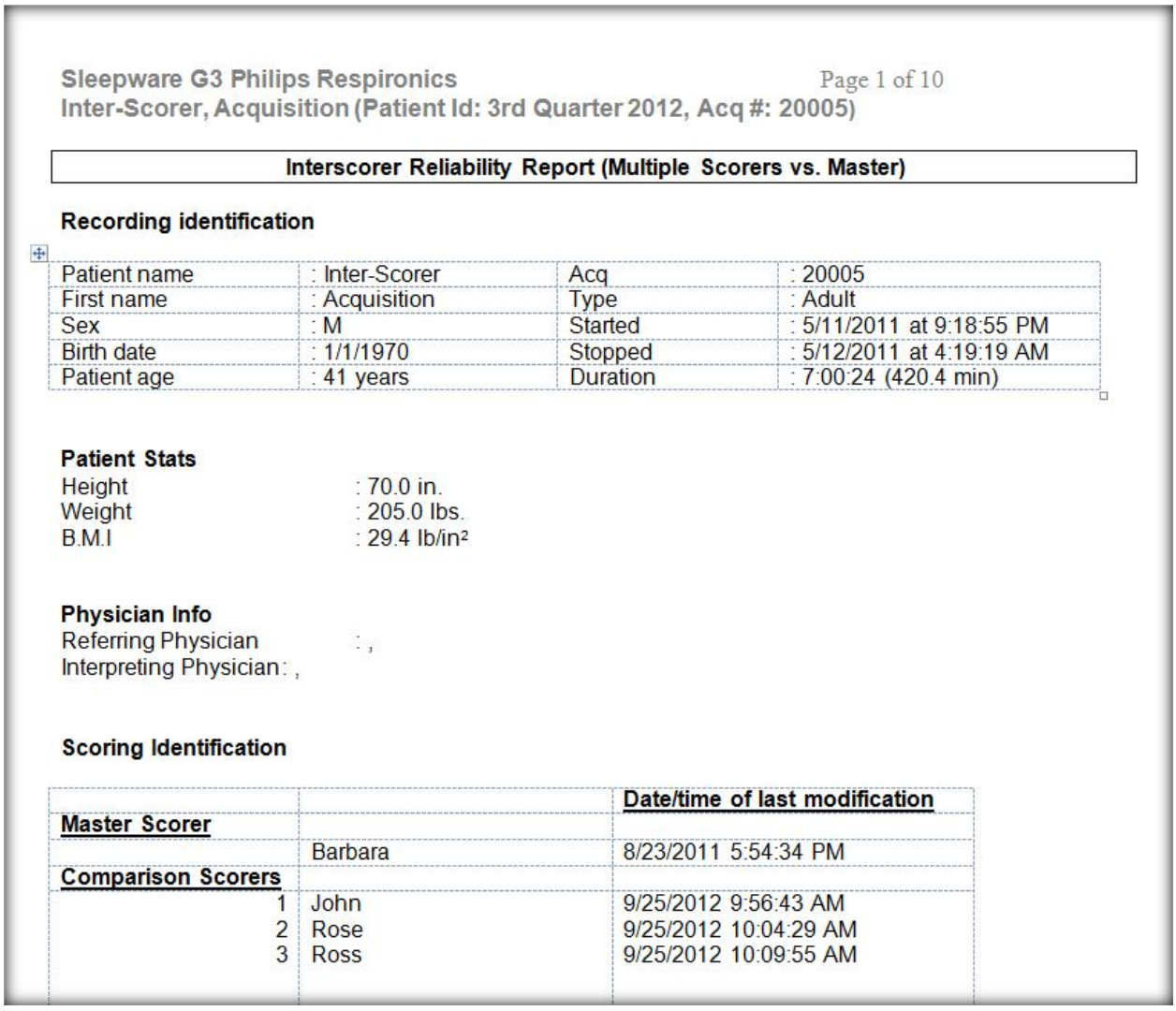
Generating Inter-Scorer Reports

The results of the comparison are produced as a report. The Inter-Scorer Reliability System can compare up to 9 scorers in a single comparison operation.
The Inter-Scorer Reliability System computes trends for the master and for each scoring. In addition to previous trends, several new trends are included:

- Pages of disagreement based on seven stages
- Four-stage hypnogram
- Seven-stage hypnogram
- Pages of disagreement based on four stages
- Number of Resp events per epoch
- Difference between master and current scoring Resp events per epoch
- Number of PLM events per epoch
- Difference between master and current scoring PLM events per epoch
- Number of arousal events per epoch
- Difference between master and current scoring arousal events per epoch



***Note**: the report can only be generated from the ISR admin study and can be generated at any time, even before cleanup*



Sleepware G3 Philips Respironics Page 1 of 10
Inter-Scorer, Acquisition (Patient Id: 3rd Quarter 2012, Acq #: 20005)

Interscorer Reliability Report (Multiple Scorers vs. Master)

Recording identification

Patient name	: Inter-Scorer	Acq	: 20005
First name	: Acquisition	Type	: Adult
Sex	: M	Started	: 5/11/2011 at 9:18:55 PM
Birth date	: 1/1/1970	Stopped	: 5/12/2011 at 4:19:19 AM
Patient age	: 41 years	Duration	: 7:00:24 (420.4 min)

Patient Stats

Height : 70.0 in.
Weight : 205.0 lbs.
B.M.I : 29.4 lb/in²

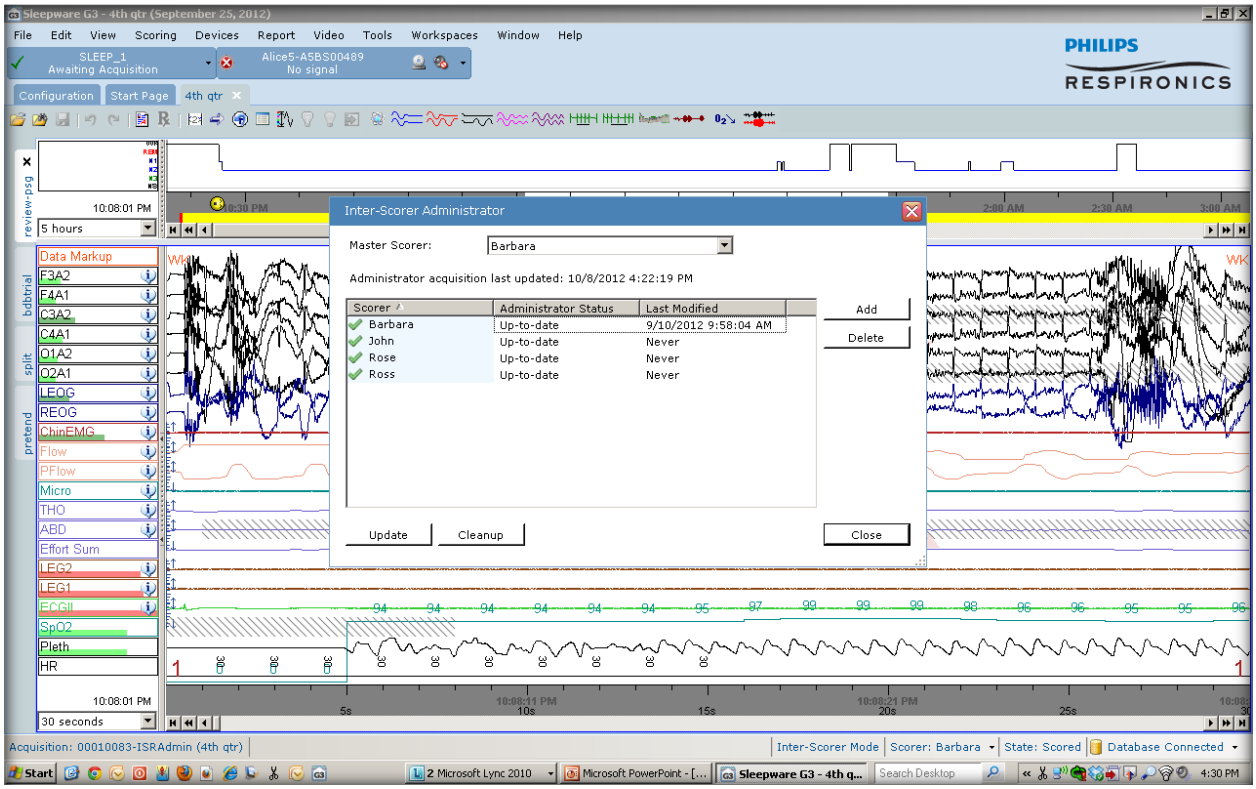
Physician Info

Referring Physician : ,
Interpreting Physician : ,

Scoring Identification

		Date/time of last modification
Master Scorer		
	Barbara	8/23/2011 5:54:34 PM
Comparison Scorers		
1	John	9/25/2012 9:56:43 AM
2	Rose	9/25/2012 10:04:29 AM
3	Ross	9/25/2012 10:09:55 AM

If the master scorer needs to be changed, you may do this under File > Inter-Scorer Admin.



PHILIPS

Sleepware G3
Quick Start Checklist

Starting a study:

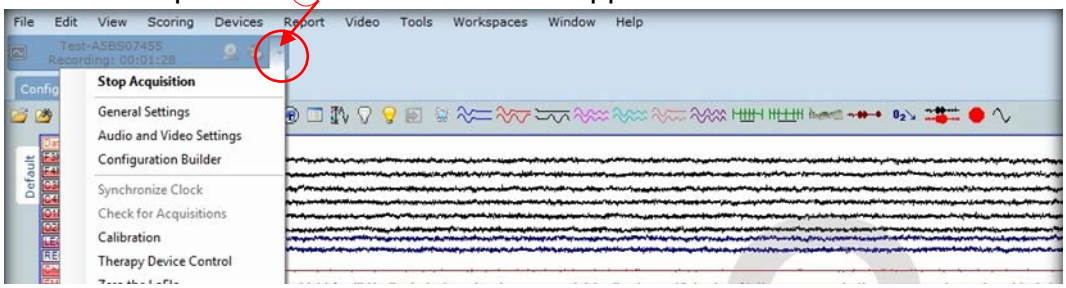
- ☐ Start acquisition (via Base Button dropdown* >Start Acquisition).
- ☐ Verify if the patient is in the database (using the first two letters of the patient's last name and an asterisk (*)); or add if necessary.
- ☐ Choose the configuration based on the type of study ordered.
- ☐ Make sure the Alice headbox is connected.
- ☐ Start the study.
- ☐ Enable audio (speaker) and video (webcam) on the Base Button.
- ☐ Perform machine calibrations (via Base Button dropdown >Calibration).
- ☐ Perform impedance check (via View>Impedance Values).
- ☐ Adjust the signal amplitude (via Gain Control) on respiratory effort, airflow, snore channels.
- ☐ Perform patient calibrations/bio calibrations (via Scoring>Predefined Comments).
- ☐ Set Lights Off (white light bulb icon on toolbar).
- ☐ Type in comments (via Spacebar).
- ☐ Add demographic data (via File>Properties).
- ☐ Launch OmniLab Direct (via Base Button dropdown >Therapy Device Control), if patient will use therapy and there is an Omnilab device in the room.

Ending a study:

- ☐ Set Lights On (yellow light bulb icon on toolbar).
- ☐ Preform patient bio calibrations (via Scoring>Predefined Comments), and perform machine calibrations (via Base Button dropdown >Calibrations).
- ☐ End the study (via Base Button dropdown or stop sign icon on toolbar).

*Key:

The Base Button dropdown is located in the upper-left corner of the window.



Consult the manual for additional information.

1128456 R00
JDW 04/14/2016

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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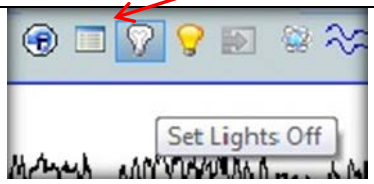
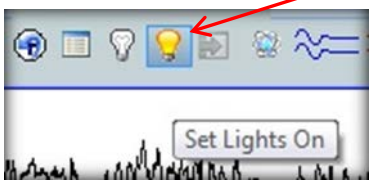
Sleepware G3

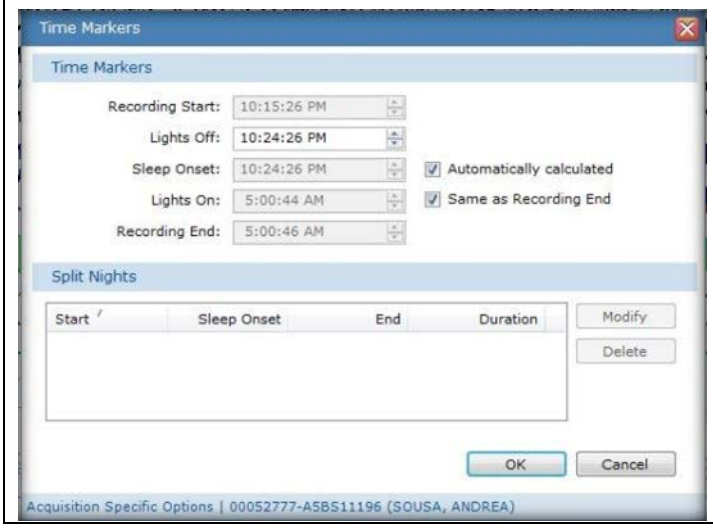
Lights Off – Lights On

Before you start staging the study, you should enter lights out and lights on.

These parameters may also be added during the acquisition. They can be set to automatically begin and end with the recording.







Sleep onset is automatically calculated as the first epoch of sleep. If you chose to edit the time, these are found from the top tool bar under Edit > Time Markers.

Consult the manual for additional information.

1118492 R00
JDW 07/11/2014

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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HOW TO SET TIME MARKERS IN SPLIT NIGHT STUDY

Two unique yellow sleep bars appear across the bottom of the window, indicating the two split segments of the study.

Consult the manual for additional information.

1118490 R00
JDW 07/11/2014

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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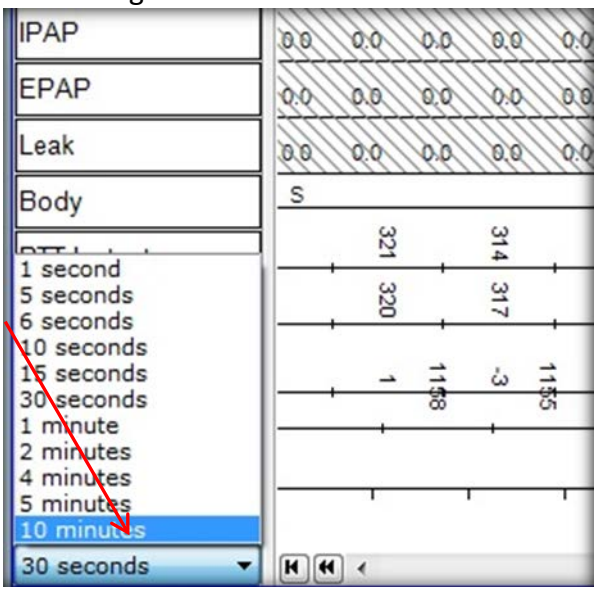
Sleepware G3

Information About Scoring Events

- Sleepware automatically deletes any events that are overlapped by manually scored events of the same family.
- You can score events while at any zoom setting.
- If you choose to look at the respiratory channels in another zoom setting, you can select a setting by using **CTRL + 1 for 15 sec., 2 for 2 min., 3 for 30 sec., 5 for 5 min., 6 for 60 sec., 0 for 10 min** or use the dropdown window.



- You cannot score events in periods marked as Wake unless you have configured Sleepware to do so. *Exception*: You can score events in the first 15 seconds of a Wake epoch that is preceded by sleep.

- You can score a respiratory event and arousal with a single mouse click-and-drag operation. When doing so, you can choose one of the following options:
    a) Central Apnea with Arousal
    b) Obstructive Apnea with Arousal
    c) Mixed Apnea with Arousal
    d) Hypopnea Apnea with Arousal

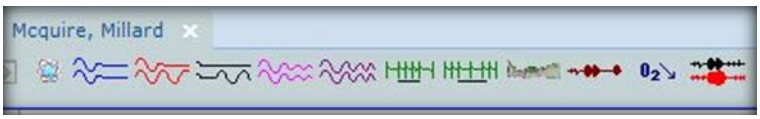
Each of these options results in the creation of two distinct events. The events are displayed in the standard manner as if they were created separately. The arousal event created has a default length of 3 seconds. The start of the arousal event will occur 1.5 seconds before the end of the respiratory event.

To Add an Event

To add an event, left click and drag mouse to highlight the event. A drop-down menu will appear allowing you to select an event.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

- You can manually mark events by clicking on the appropriate icon from the Single-click Scoring toolbar.



Then, click in the raw data to add that event.

- You can use single-click scoring or use single-click scoring smart mode. You can have a single click icon active and still click and drag another type of event. For example, click and drag a respiratory event and single click the arousal.

The respiratory events are color-coded. Default colors are:

- *Central apneas (C) are* **blue.**
- *Obstructive apneas (O) are* **red.**
- *Hypopneas (H) are* ***light*** **purple.**
- *RERA (R) are* ***dark*** **purple.**
- *Mixed apneas (M) are* **black.**

To Delete an Event

The **DELETE KEY** is used to remove unwanted events.

To use it, click on the unwanted event, if it is not already highlighted.

Then, press the DELETE key. You can also right click on any event and delete all events of that type.

** Note*: Screenshots are from the Sleepware G3 Software and Online Help.
** Disclaimer*: Screenshots may change based on software version.

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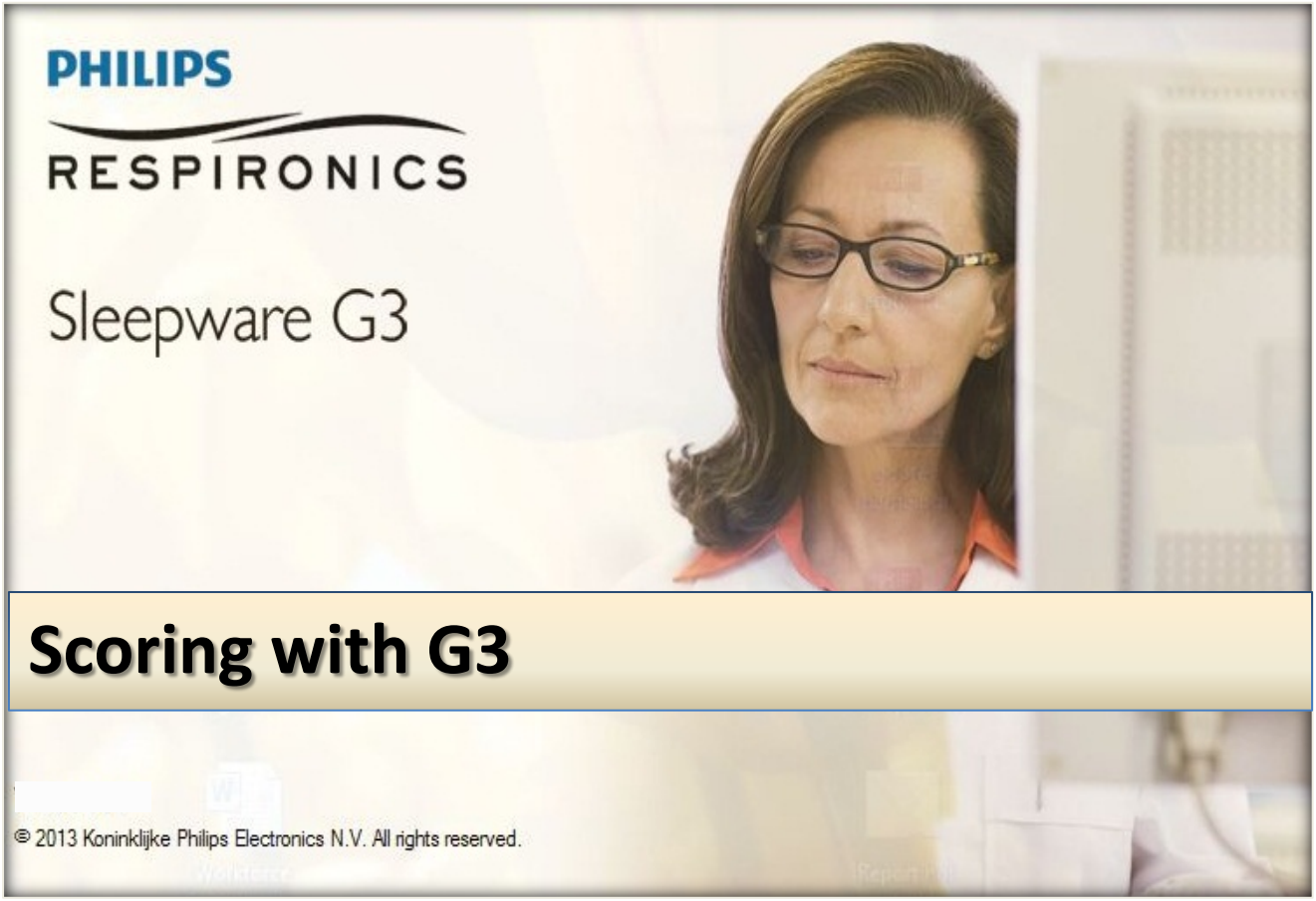
G3 Training Module



* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

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How to Score Studies

When scoring studies, there are different options available using G3 software. These are all found on the configuration tab of the software.

Scoring Setup

In the Scoring section on the Configuration tab, these options include:

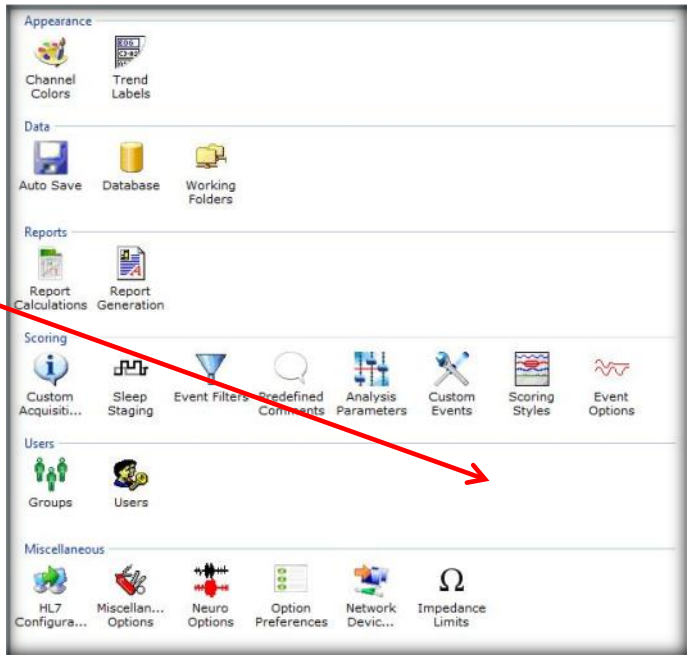
- Custom Acquisitions Properties
- Sleep Staging
- Event Filters
- Predefined Comments
- Analysis Parameters
- Custom Events
- Scoring Styles
- Event Options

- The **Scoring Styles** feature was designed to allow you to customize the functionality and appearance of scoring events.

- To access the scoring styles: Click the **Configuration** tab, then…

Double-click on the **Scoring Styles** icon.

The Scoring Styles window is displayed.
Here, you can set your individual scoring style.



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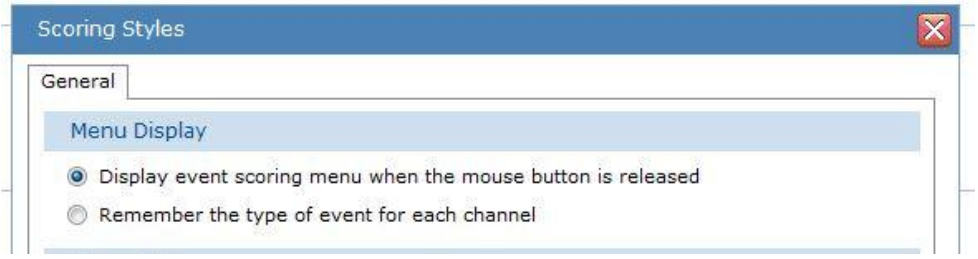
How to Set Scoring Styles

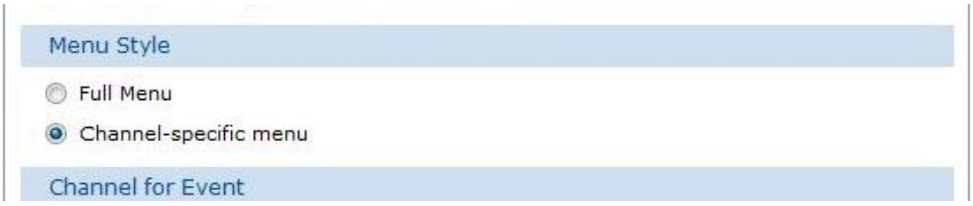
1. Select a **Menu Display** option.
    a) The first option means that each time you click-and-drag the mouse pointer along a channel's waveform and release the mouse button, a pop-up menu of events is displayed. You then click on an event in the list to mark it on the study.

    b) The second option is less manual. You only click-and-drag the mouse pointer along a channel's waveform and choose an event from the pop-up menu the first time on a channel. For all subsequent click-and-drag operations on the same channel, Sleepware remembers the event type initially selected and marks that same event type.



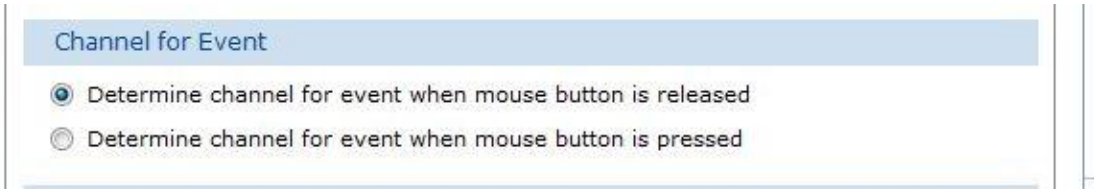
2. Select a **Menu Style** option.
    a) The first option displays the full menu of event types regardless of the channel you're on when you release the mouse button after dragging.

    b) The second option means that the pop-up menu only displays events related to the channel you're on at the time. For example, if you're currently on the ECG channel and the pop-up menu is displayed, it will only offer events relevant to ECG. However, these are also configurable by changing the selections under the **Menu** tab for the ECG channel. Refer to Event Options for details.



3. Select a **Channel for Event** option. This option determines how the software decides which channel to use when you dragged across it.
    a) The first option means that once you left-click and start to drag, the event is not marked until the mouse button is released, regardless of the channels crossed over (up or down). The highlight bar actually moves (up or down) with the mouse pointer.

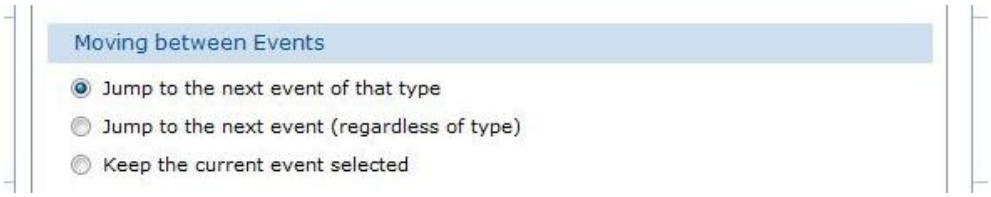
    b) The second option, unlike the 1st option, means that once the left-click is made on a given channel, regardless of where the mouse pointer may move while it is dragged, releasing the mouse button marks the channel that was clicked on.



4. Select the **Moving Between Events** option
    a) The first option causes Sleepware to automatically move the next event of the same type immediately following the event's validation (pressing the "+" key). Also, this option enables the **Tab** key to move from one event to the next event of the same type. The **Shift + Tab** moves between the same events but in reverse order.

    b) The second option causes Sleepware to immediately move to the next chronological event regardless of its type once the current event is validated. Also, this option enables the **Tab** key to move in chronological order from event to event regardless of the event's type. The **Shift + Tab** moves in reverse order.

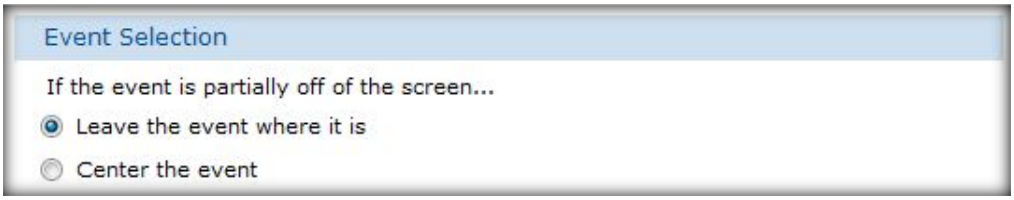
    c) The third option prevents Sleepware from moving away from the initial event validated.



5. Select an **Event Selection** option.

    a. The 1st option causes Sleepware to leave the event where it is on the screen even if it runs partially off the current display area.

    b. The 2nd option causes Sleepware to center an event when it is clicked on even if it is only partially displayed at the time.



6. Select a **Marking Event** option.

    a. The 1st option causes Sleepware to provide an explanation about why events cannot be marked. This is more helpful than seeing disabled events on the pop-up menu.

    b. The 2nd option causes Sleepware to display a temporary vertical black line at the beginning and end of the time period used for marking an event.

7. Click **OK** to save changes and close the Scoring Styles window.

PHILIPS

Event Options

The Event Options are shared options and can be changed by those that have permission to do so. These changes affect all users on all computers.

The event option window allows you to set the colors of individual events within family event groups. You can also set attributes for event channels, keyboard shortcut keys for events, and the channel-specific menu structure for channel types and the duration for single-click scoring events.

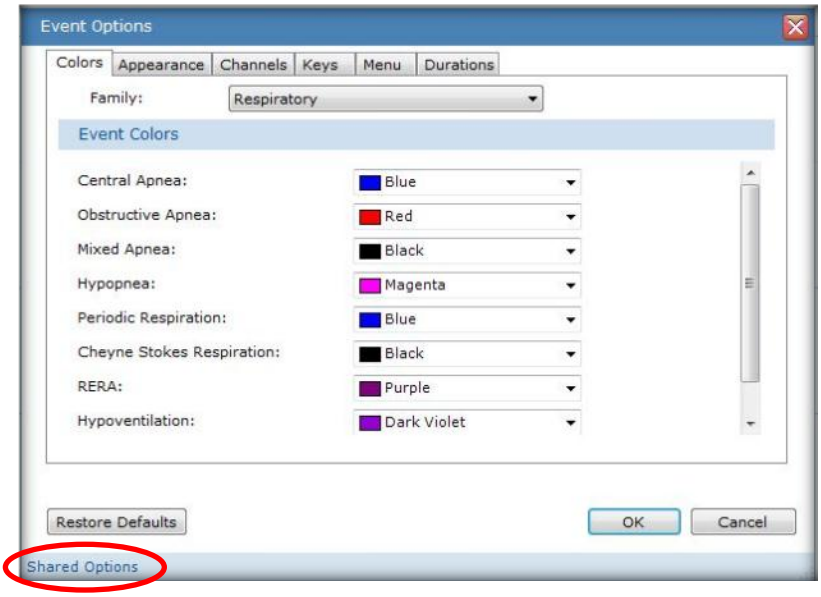
The **Colors** Tab

Use this tab to assign colors to events.

Follow these steps to assign colors:

1. Select a family of events from the **Family** drop-down list. All events associated with that family are displayed.

2. Select a color for each from the lists.



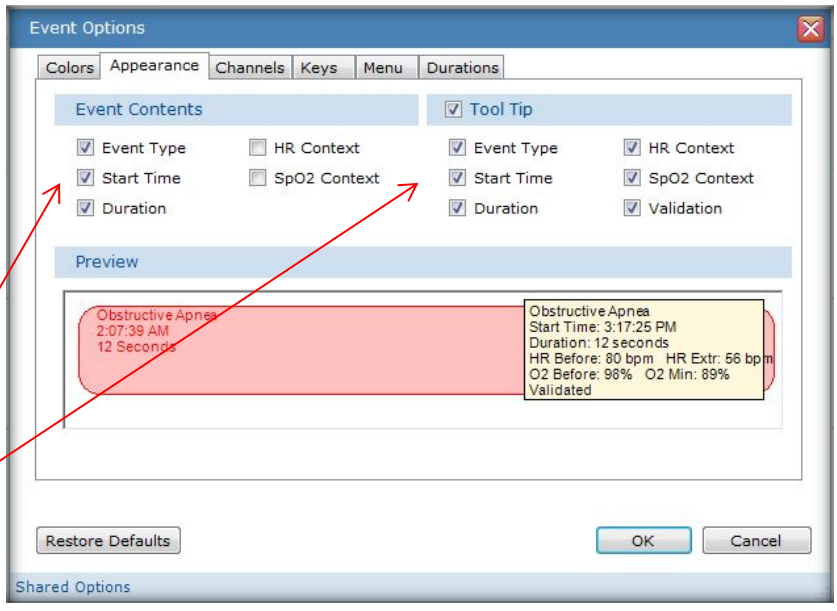
The **Appearance** Tab

This tab allows you to specify the attributes seen on an event marker/label and tooltip.

As you select attributes, the example marker in the Preview area changes in real-time to reflect your selections.

* You can select **3** attributes under Event Contents

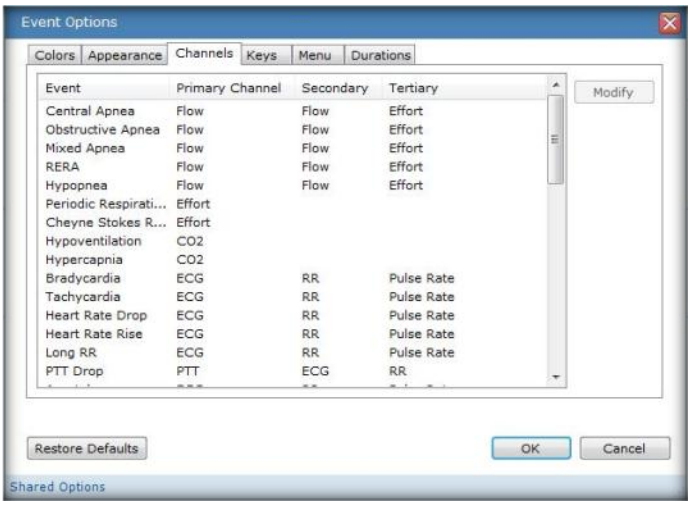
* You can select **6** attributes under Tool Tip



PHILIPS

The **Channels** Tab

Use this tab to specify/modify the rules by which events are displayed on channel types. Each row represents an event type and the default primary, secondary, and tertiary channel used for placing that event when scored.

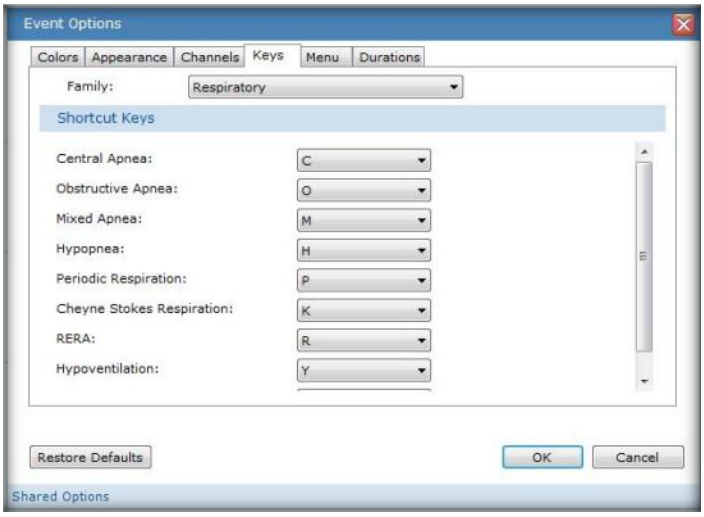


The **Keys** Tab

This tab allows you to associate hot keys with events. The legacy keys have been retained for those who have used earlier versions of Sleepware.

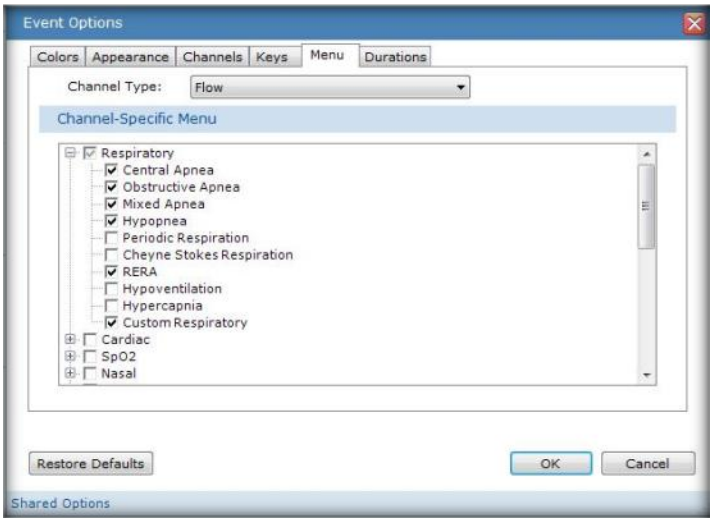
<u>Follow these steps to view/change hot key associations:</u>

1. Select a **Family** of events from the list. All events associated with that family are displayed.
2. Select a 'hot key' for each from the lists that will represent the specific event.



The **Menu** Tab

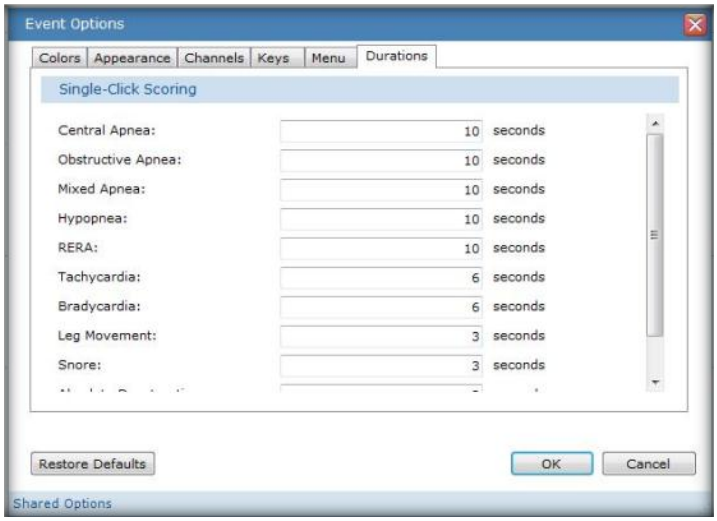
Use this tab to view/modify the channel-specific event menu definitions for each channel family.



PHILIPS

The **Duration** Tab

Use this tab to view/modify the durations for events available for single-click scoring.
Enter the desired value for the specific duration for a given single-click event type.
Click **OK** to save your changes.



Now you are ready to begin scoring!

PHILIPS

Automated Scoring

Online (real-time) Auto-scoring

Sleepware provides an auto analysis capability that automatically determines certain events. During an Alice 5/Alice 6/Alice LE acquisition, auto analysis is performed for event detection. Auto-scored events appear on the display in real time. Sleep staging is **not** performed during the acquisition, but rather is performed at the end of the acquisition during integration time. During an acquisition, the analysis parameters configured for the application are used.

Offline Auto-scoring

Sleepware automatically scans sleep study data immediately before integrating the acquisition. You can also rescan the data at any time. During this process Sleepware performs sleep staging and event scoring using the scanning parameters found in the Analysis Parameters and Respironics Analysis Options windows.

Re-analysis is performed on legacy acquisitions that are imported; events and scoring associated with imported acquisitions are not retained during import, neither are comments or video.

Re-analysis can be performed on any acquisition. You can perform a selective re-analysis based on a particular time frame and/or event types analyzed.

Note: **Computer-based sleep scoring is intended to help improve efficiency in scoring a sleep study—not to replace clinical judgment and analysis. Philips Respironics strongly recommends that a competent healthcare provider review the entire study and modify the scoring as necessary.**

Analysis Parameters

Use the Analysis Parameters option in the Configuration tab to select and configure the detection types to include in auto-analysis (auto-scoring) of events.

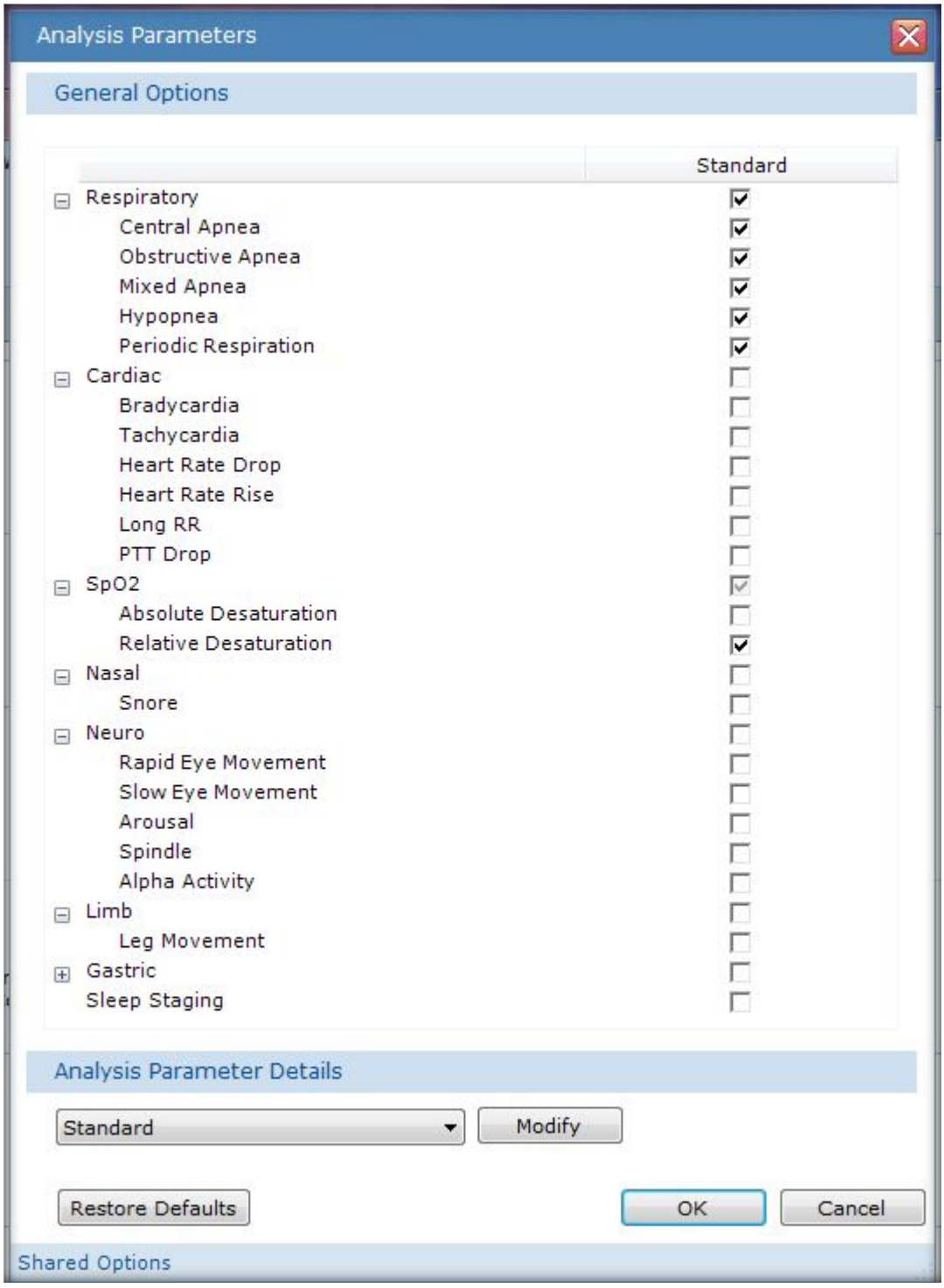
Note: These parameters are used for online Alice base station acquisitions and when an Alice PDx is imported. A copy of the parameters is stored with the acquisition. Once the parameters are stored, the Analysis Parameters defined in the Configuration tab are no longer used by the acquisition. To change acquisition-specific parameters, use the Scoring menu on the Main Menu bar while displaying an acquisition.

To select detection types:

1. Click the **Configuration** tab.
2. Double-click the **Analysis Parameters** link.

   The Analysis Parameters window opens.
3. Click the check box associated with an applicable detection type.
4. Clicking the + expands the type category to show the individual event types under it.
5. (Optional) Select the source for the automatic analysis algorithms from the list. Currently, only Standard is supported and is the default selection.
6. (Optional) Click the **Modify** button.

   The Standard Analysis Options window opens. Refer to the following Standard Analysis Options section below for details.
7. (Optional) Click the **Restore Defaults** button to re-establish the default settings for the General Options.
8. Click **OK** to save your changes and close the window.


Analysis Parameters
General Options
Standard
Respiratory
Central Apnea
Obstructive Apnea
Mixed Apnea
Hypopnea
Periodic Respiration
Cardiac
Bradycardia
Tachycardia
Heart Rate Drop
Heart Rate Rise
Long RR
PTT Drop
SpO2
Absolute Desaturation
Relative Desaturation
Nasal
Snore
Neuro
Rapid Eye Movement
Slow Eye Movement
Arousal
Spindle
Alpha Activity
Limb
Leg Movement
Gastric
Sleep Staging
Analysis Parameter Details
Standard
Modify
Restore Defaults
OK
Cancel
Shared Options

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The **Hypopnea** tab

Use this tab to configure the auto analysis parameters for hypopnea detection:

a. Set the **Minimum Duration** value (seconds). The range is 0.0 - 600.0; default value is 10.0.

b. Set the **Maximum Duration** value (seconds). The range is 0.0 - 600.0; default value is 60.0.

c. Set the **Amplitude Ratio** value (percentage).

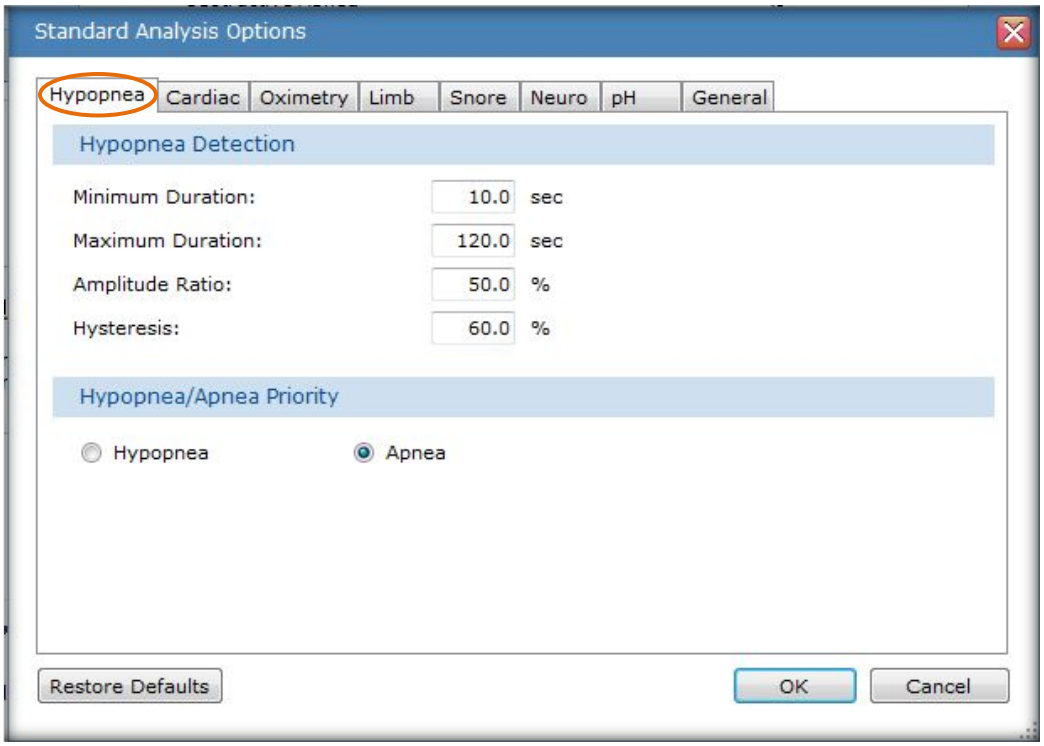
   This is a threshold used to determine if a hypopnea is auto-scored. Sleepware builds a "model breath" of the breathing under analysis. If the amplitude of the breath currently being analyzed is equal to the hypopnea amplitude factor multiplied by the amplitude of the model breath, then a hypopnea event is begun. The range is 0.0 - 100.0; default value is 50.0%.

d. Set the **Hysteresis** value (percentage).

   Sleepware ends the hypopnea when the amplitude of the current breath reaches the amplitude of the model breath times the hysteresis factor. The range is 0.0 - 100.0; default value is 60.0%.

e. Select **Hypopnea** or **Apnea**.

   If an apnea and an hypopnea are auto-scored at that same time period, this setting determines which event takes priority. The default value is Hypopnea.



The **Cardiac** tab

Use this tab to configure the auto analysis parameters for cardiac event detection:

a. Set the **Adult HR Below** value (beats per minute). The range is 0 - 255; default value is 60.

b. Set the **Infant HR Below** value (beats per minute). The range is 0 - 255; default value is 100.

   These are thresholds for the heart rate to fall below the baseline to auto-score a bradycardia.

c. Set the **Adult HR Above** value (beats per minute). The range is 0 - 255; default value is 100.

d. Set the **Infant HR Above** value (beats per minute). The range is 0 - 255; default value is 150.

   These are thresholds for the heart rate to rise above the baseline to auto-score a tachycardia.

e. Set the **HR Drop Threshold** value (percentage). The range is 0.2 - 100; default value is 22.2%.

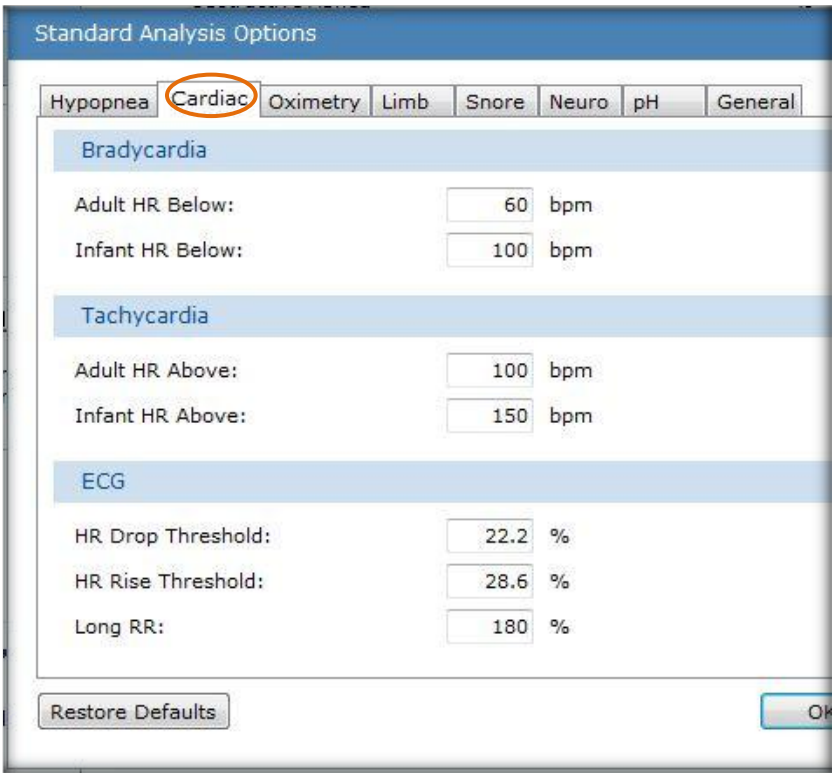
   This is a drop percentage threshold used in determining a (relative) low heart rate event.

f. Set the **HR Rise Threshold** value (percentage). The range is 0.2 - 200; default value is 28.6%.

   This is a rise percentage threshold used in determining a (relative) high heart rate event.

g. Set the **Long RR** value (percentage). The range is 0 - 500; default value is 180.0%.

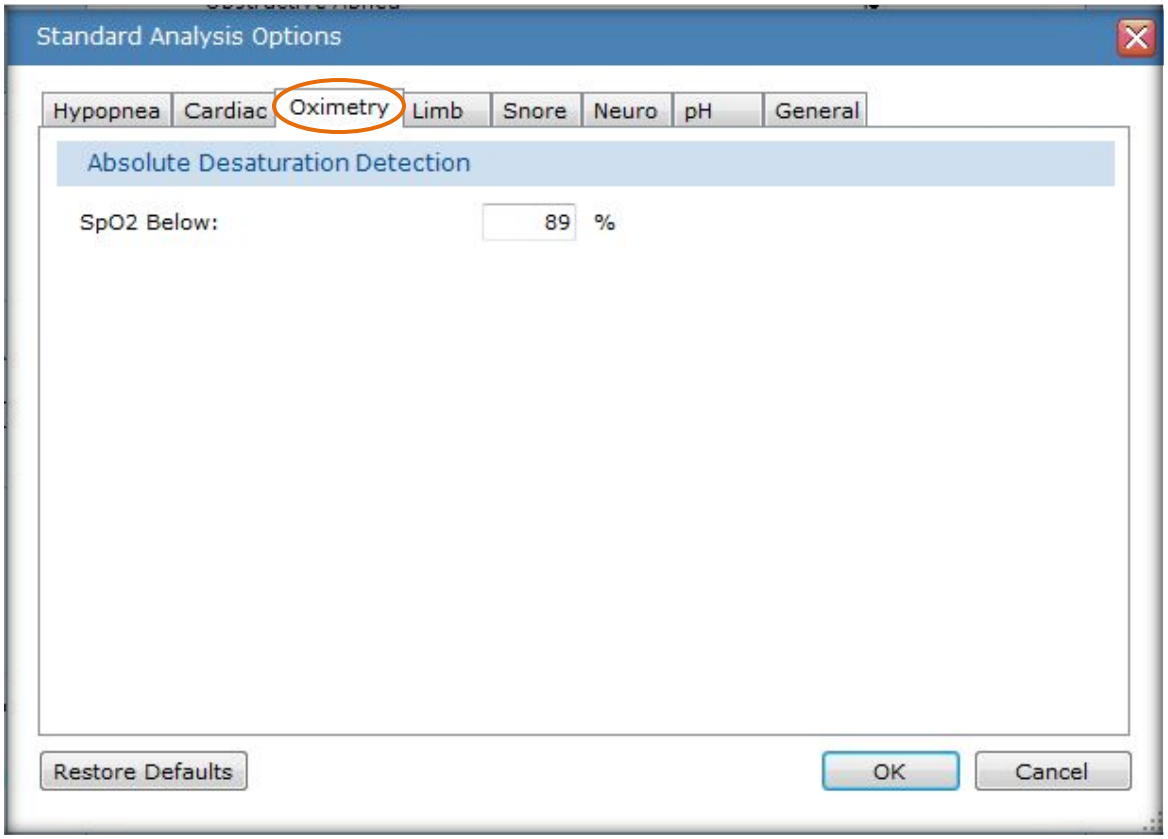
   The long RR algorithm compares the time between R-waves x and y, and the time between R-waves y and z. If the second interval is a certain percentage greater than the first interval, then Sleepware scores the second R-wave-to-R-wave (R-R) interval as a long RR event.



The **Oximetry** tab

Use this tab to configure the auto analysis parameter for absolute desaturation detection:

a. Set the **SpO2 Below** value (percentage). The range is 0 - 100; default value is 80.
   The threshold rate to fall below the baseline in order to auto-score an absolute desaturation.



The **Limb** tab

Use this tab to configure the auto analysis parameters for leg movement detection:

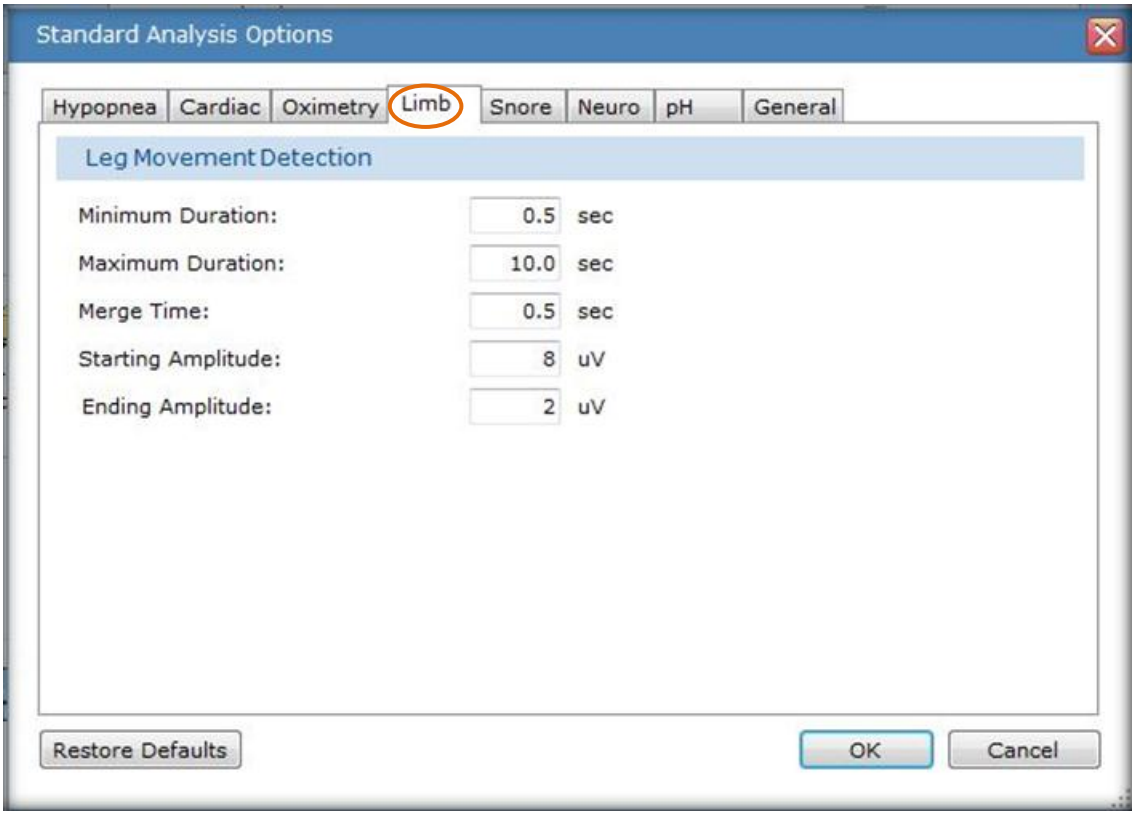
a. Set the **Minimum Duration** value (seconds). The range is 0.0 - 600.0; default value is 0.5.
   The minimum duration to detect a leg movement.

b. Set the **Maximum Duration** value (seconds). The range is 0.0 - 600.0; default value is 10.
   The maximum duration to detect a leg movement.

c. Set the **Merge Time** value (seconds). The range is 0.0 - 60.0; default value is 0.5.
   Sleepware merges detected leg movement events on the same leg channel that overlap or are within the merge time.

d. Set the **Starting Amplitude** value (microvolts). The range is 2 - 100; default value is 8.
   A leg movement event starts when the amplitude rises above the baseline by the amount specified by the Starting Amplitude parameter.

e. Set the **Ending Amplitude** value (microvolts). The range is 2 - 100; default value is 2.
   A leg movement event ends when the amplitude falls to the value specified by the Ending Amplitude parameter.



The **Snore** tab

Use this tab to configure the auto analysis parameters for snore detection:

a. Set the **Blind Period** value (seconds). The range is 0.0 - 60.0; default value is 2.0.

   The blind period is defined as the amount of time, in seconds, that Sleepware overlooks data, or is "blind," past the detection of an individual snore.

b. Set the **Max. Period** value (seconds). The range is 0.0 - 60.0; default value is 6.0.

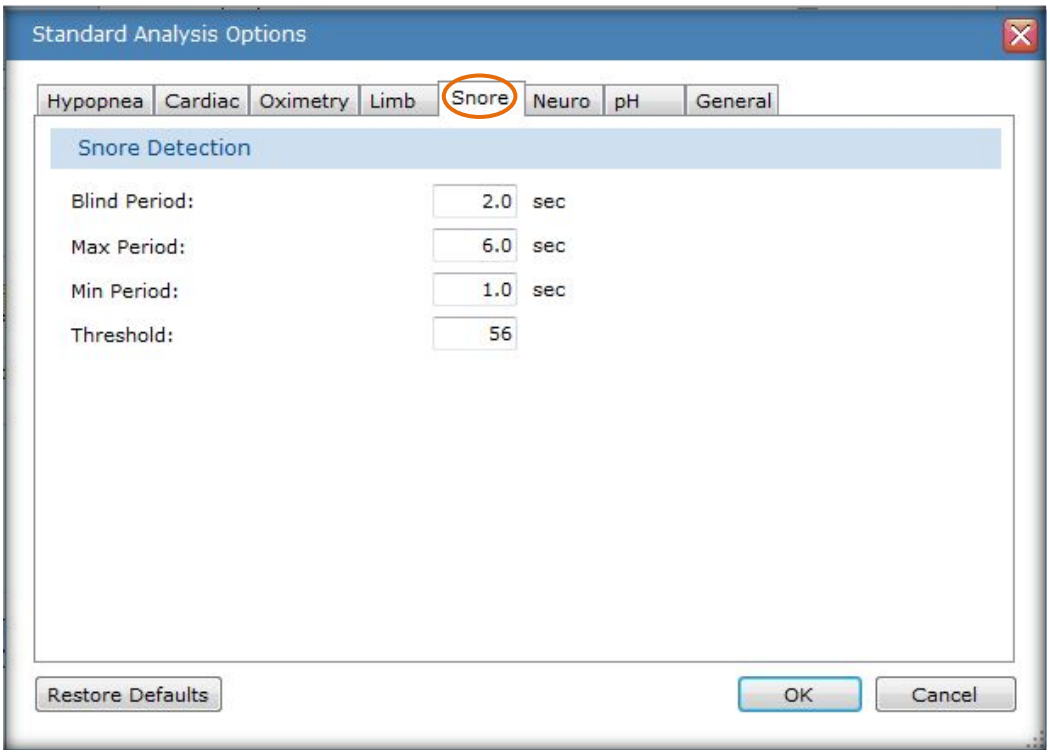
   The maximum number of seconds that can occur between two detected snores in order to consider them part of a snoring episode.

c. Set the **Min. Period** value (seconds). The range is 0.0 - 60.0; default value is 3.0.

   The minimum number of seconds that can occur between two detected sounds to consider them separate snoring sounds.

d. Set the **Threshold** value. The range is 0 - 250; default value is 56.

   This is the minimum amplitude required to detect a snore on the snore channel. The value is a computer-based number representing amplitude. The higher the number, the higher the amplitude required to detect a snore, resulting in less snores being detected. The lower the number, the lower the amplitude required, resulting in more snores being detected.



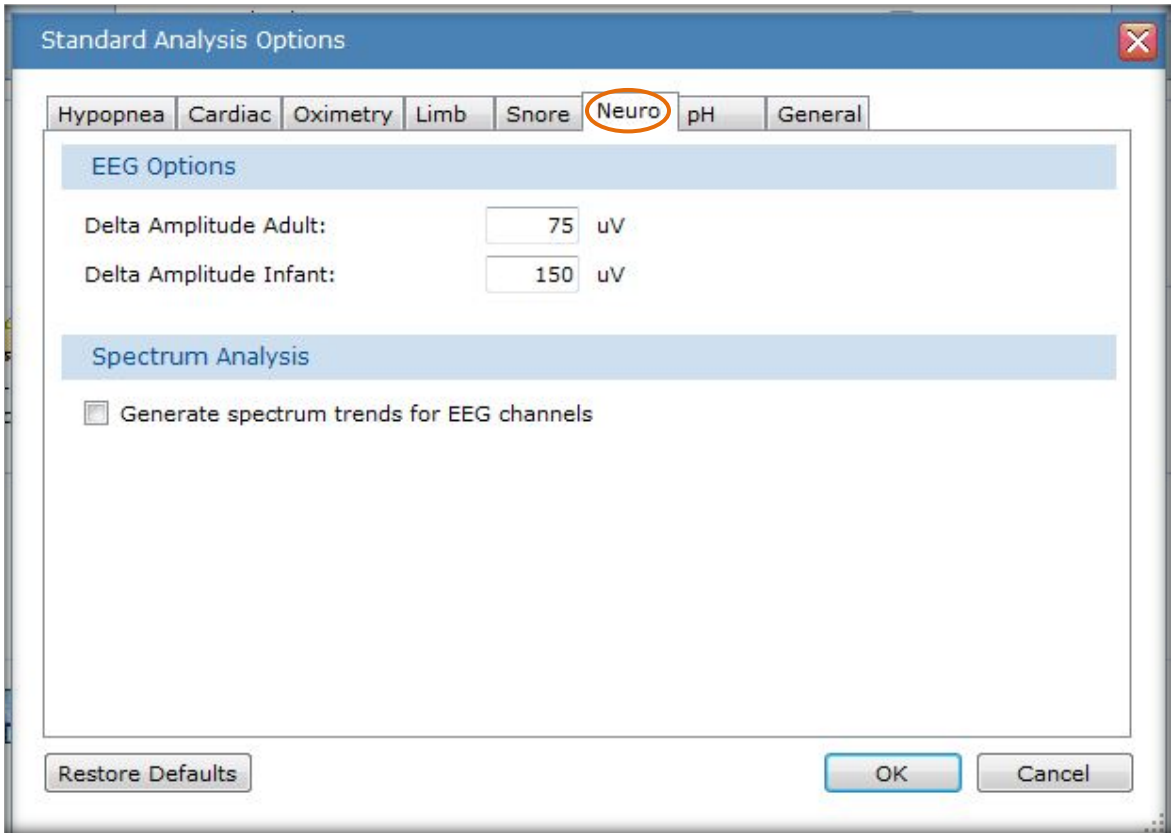
PHILIPS

The **Neuro** tab

Use this tab to configure the auto analysis parameters for Neuro event detection:

a. Set the **Delta Amplitude Adult** value (microvolts). The range is 0 - 300; default value is 75. The minimum amplitude to detect a delta wave for an adult acquisition.

b. Set the **Delta Amplitude Infant** value (microvolts). The range is 0 - 300; default value is 150. The minimum amplitude to detect a delta wave for an infant acquisition.



PHILIPS

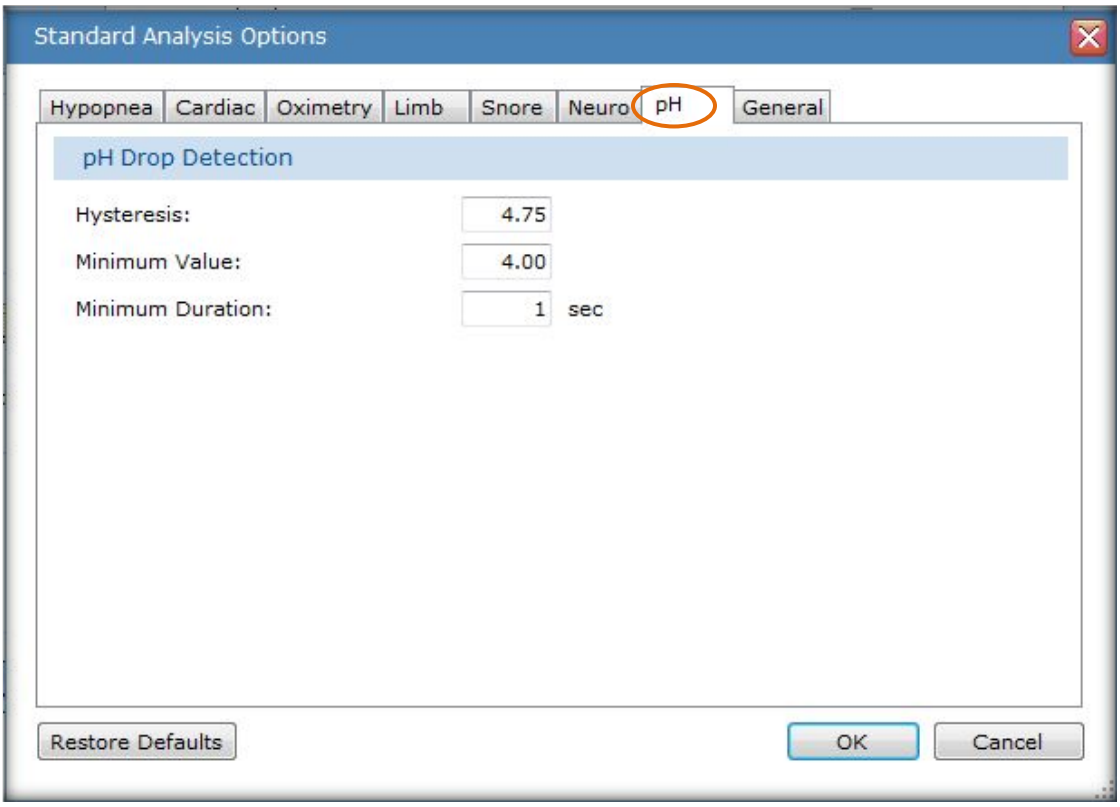
The **pH** tab

Use this tab to configure the auto analysis parameters for pH detection:

a. Set the **Hysteresis** value. The range is 0.0 - 14.0; default value is 4.75.
   Determines the end of a pH drop event. The pH must rise above this threshold to end the event.

b. Set the **Minimum Value**. The range is 0.0 - 14.0; default value is 4.0.
   Determines the start of a pH drop event. The pH must fall below this threshold to start the event.

c. Set the **Minimum Duration** value (seconds). The range is 0 - 600; default value is 1.
   Minimum duration for a pH event to be detected.



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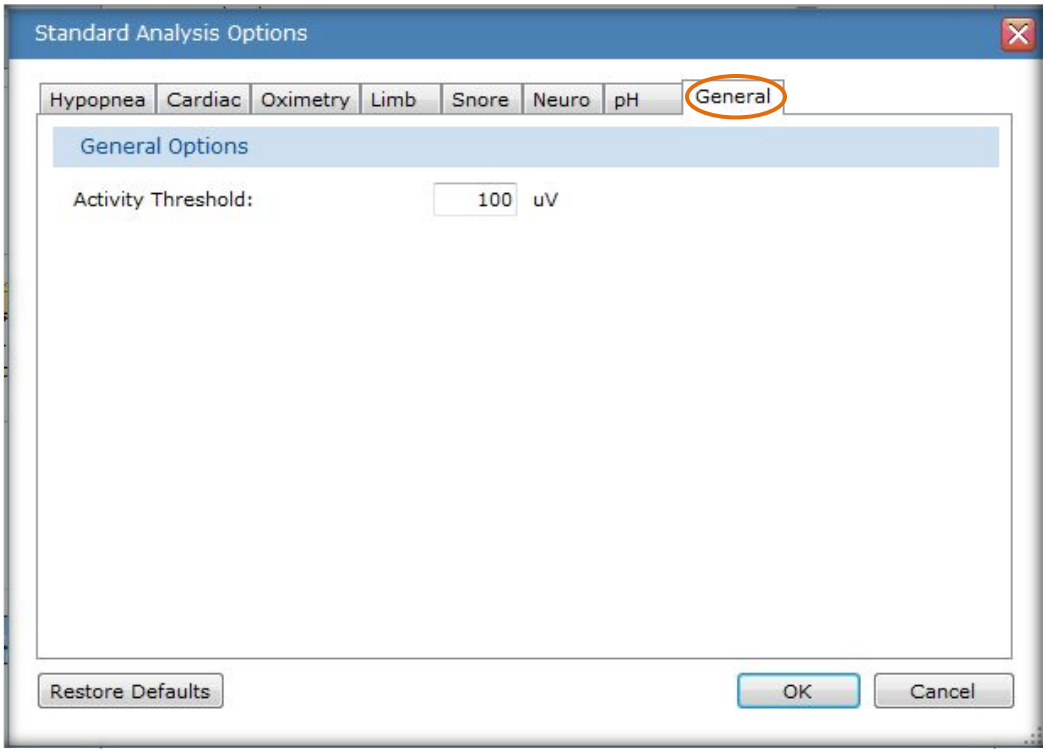
The **General** tab

Use this tab to configure other analysis parameters:

a. Set the **Activity Threshold** value (seconds). The range is 0 - 500uV; default value is 100uV.

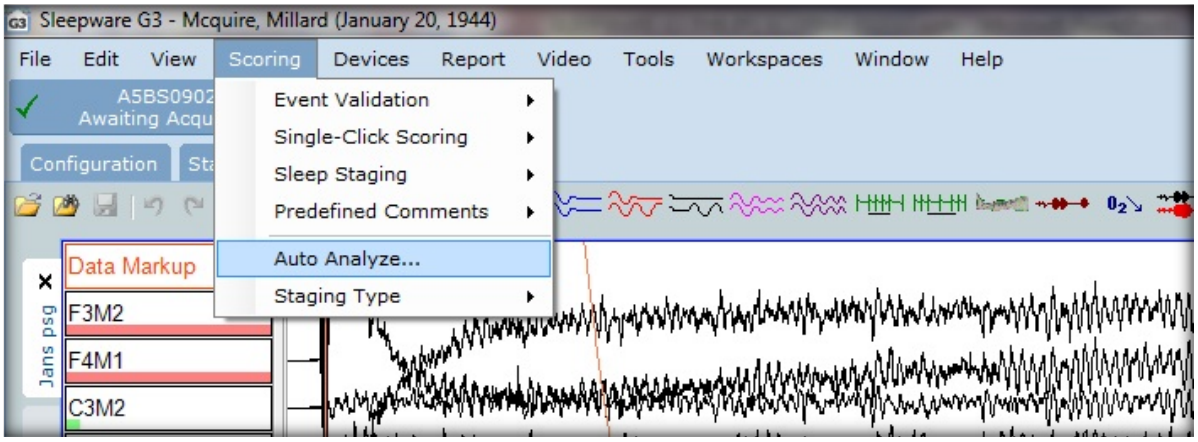
   This parameter specifies the activity threshold voltage used by the Standard analysis implementation when computing the actimetry channel for Alice PDx. Voltage on the raw actimetry channel must exceed the threshold voltage for a half second in order for activity to be present.



PHILIPS

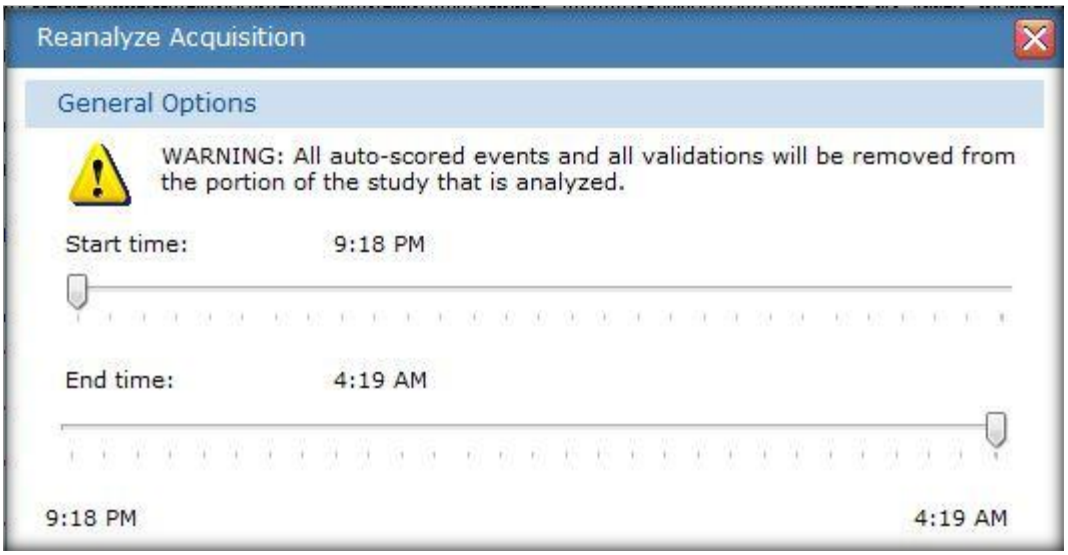
Reanalyze Acquisition

Go to SCORING, then Auto Analyze to re-execute the auto-scoring and sleep stage algorithms. You can select the time range to utilize for the analysis as well as the specific auto-scoring items to re-execute (reanalyze).

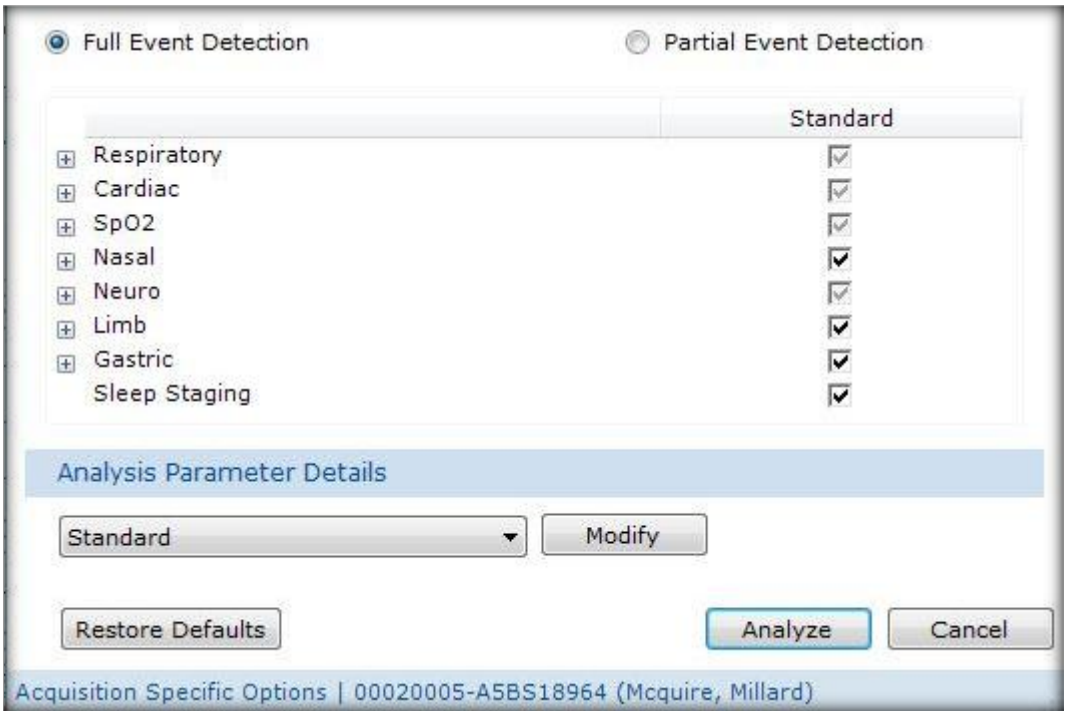


Follow these steps to reanalyze an acquisition:

1. Specify the **Start** and **End** times using the slide controls. Each defaults to the acquisition start and end times.



2. Specify **Full** or **Partial Event Detection**:



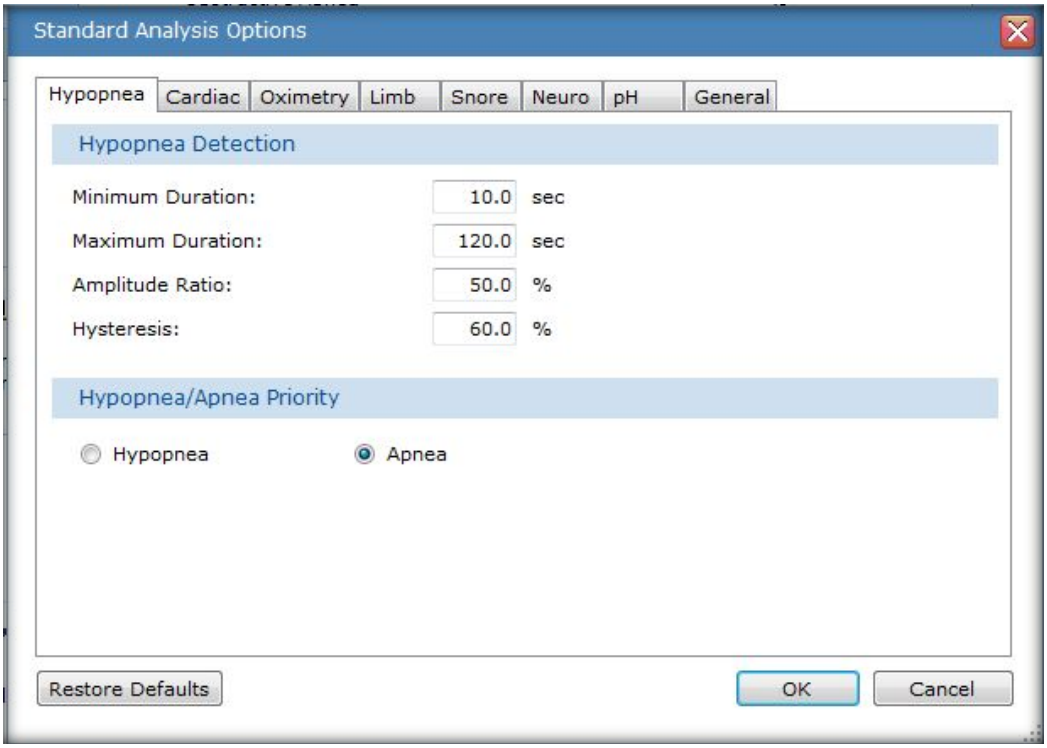
- **Full Event Detection**: Prior to performing the actual analysis operation, all auto-scored events are removed from the portion of the study that is being analyzed.

- **Partial Event Detection**: All auto-scored events for the selected event types are removed from the portion of the study that is being re-analyzed. Auto-scored events whose type is not selected for analysis remain in the study. The analysis operation then performs event detection on only the selected event types. For example, if you select only Leg Movement events, the study will still have all the auto-scored events whose type was not leg movement following the analysis . In addition, it will also have auto-scored leg movement events (if there were any detected by analysis).

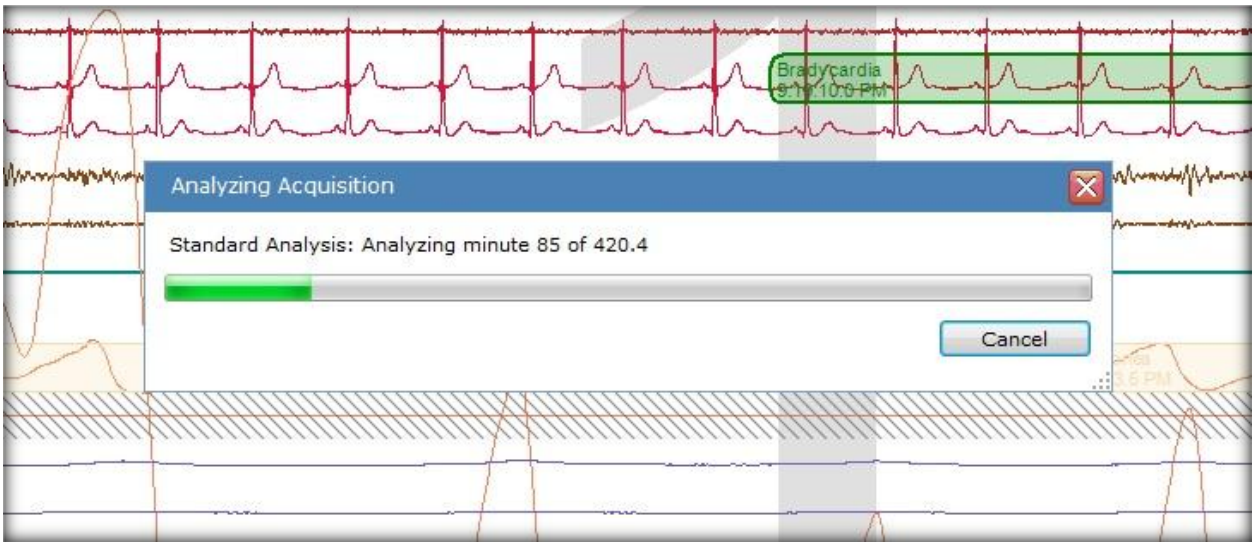
3. Select an algorithm module to use from the list. Currently, only the Philips Respironics Standard module is available for selection.

4. Click the **Modify** button to review/change the Analysis Parameters.

5. Click **OK** to execute any changes you have made to the analysis parameters.



6. A progress window opens from which you can also cancel the operation. When the analysis is complete, a confirmation message is displayed and the window is closed.



Notes:

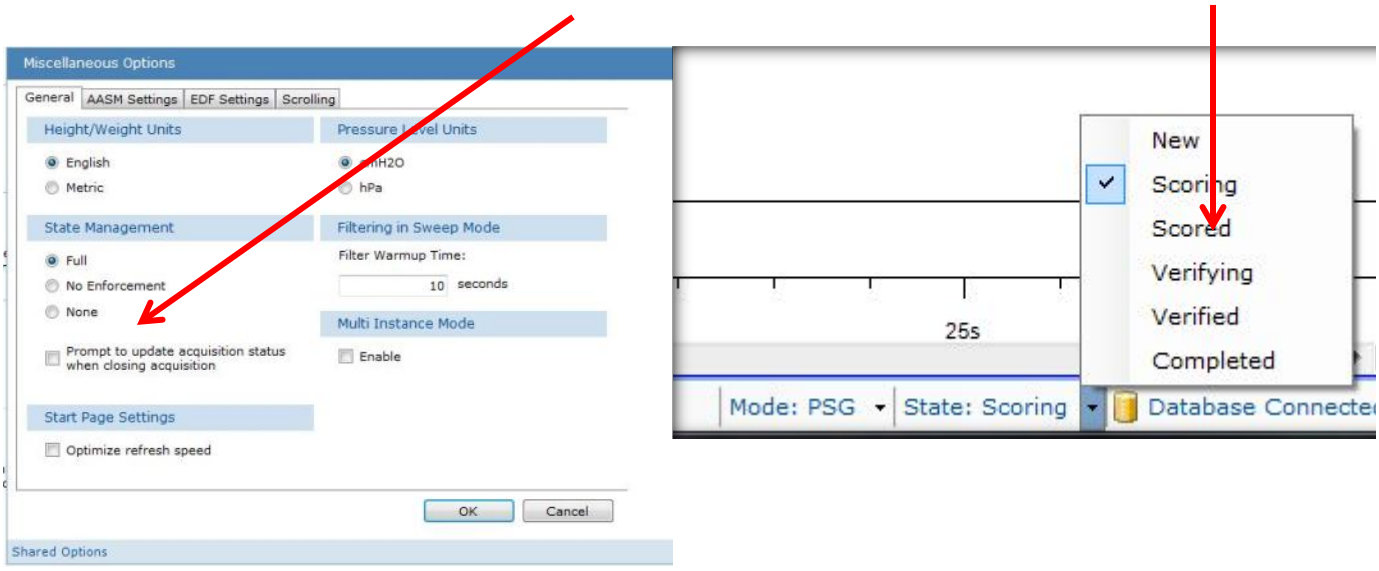
- Clicking the **Restore Defaults** button restores the default detection type selections.
- All changes to the acquisition are automatically saved whenever you reanalyze the acquisition.

PHILIPS

Manual Scoring

Manual scoring of a study can be done in real-time or after having acquired and saved a study.

The methods and customization of scoring styles are the same for both. Refer to Scoring setup for details. If you are enforcing "state," then the study must be in the scoring state post acquisition.

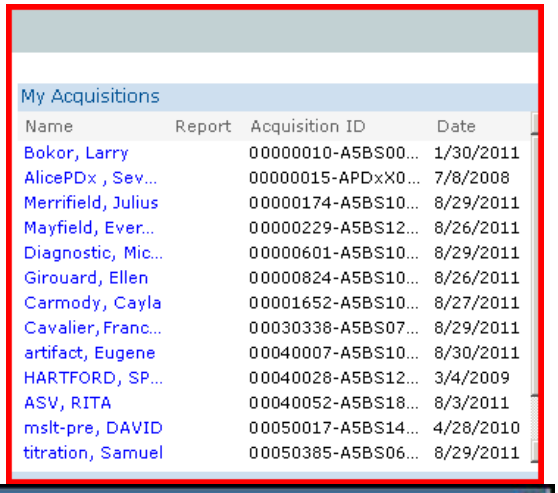


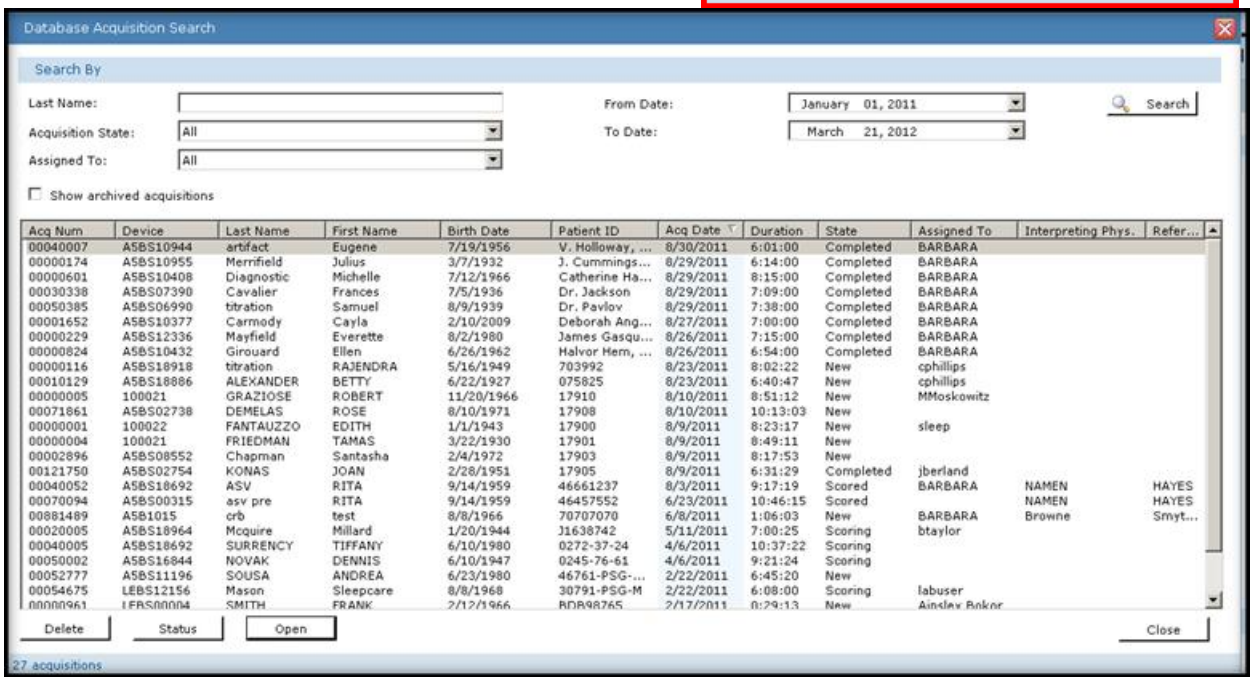
PHILIPS

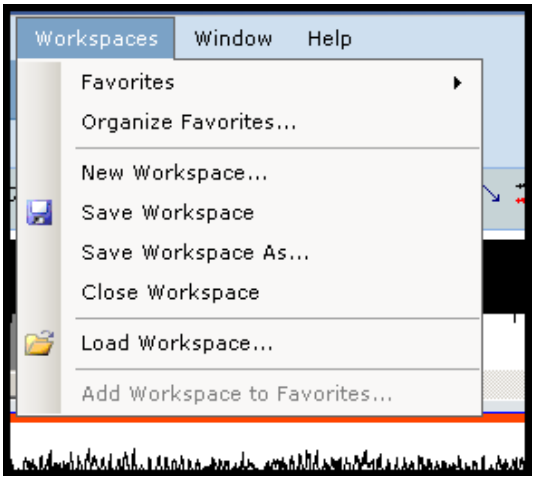
If Scoring Post Acquisition

From the start page tab, select the record to be scored. If the computer is attached to the database, the record to be scored should be assigned to the scorer and should be on the right side of the start page tab under My Acquisitions.

If the record had not been assigned to you, then you must search the database.





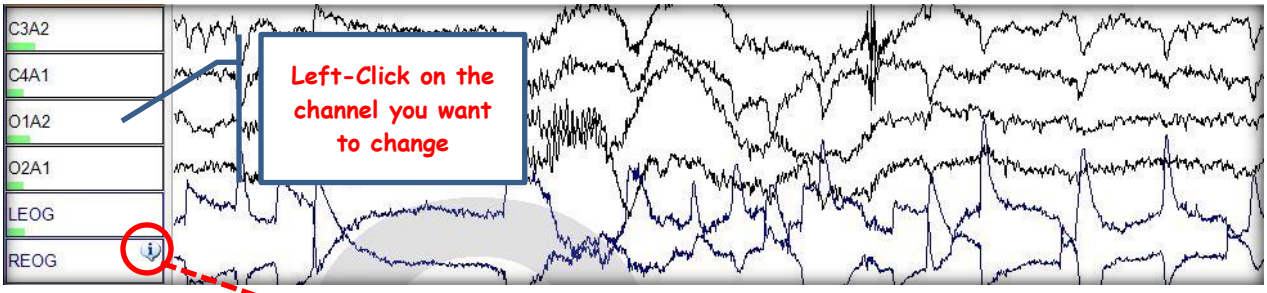


If you have not already loaded the workspaces you want, go to the top tool bar and select workspaces. Then, load your workspace. If you have already organized your favorite workspaces these should show as tabs on the left side of the record.

PHILIPS

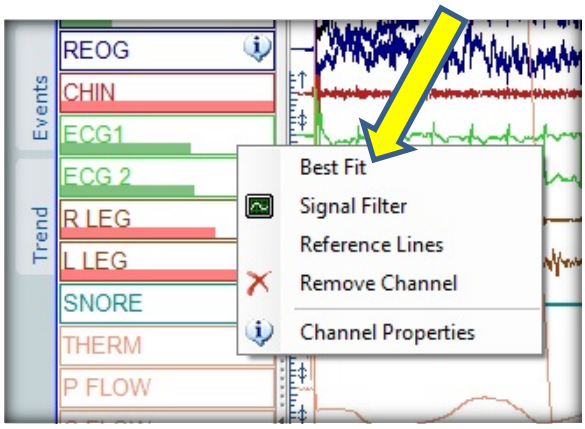
Channel Display (Appearances)

To change Channel Display (Appearances), click once on the Channel Label and press the + or – key to change the "appearance" of the channel.



When the channel display is modified in any way you will see a by the label.

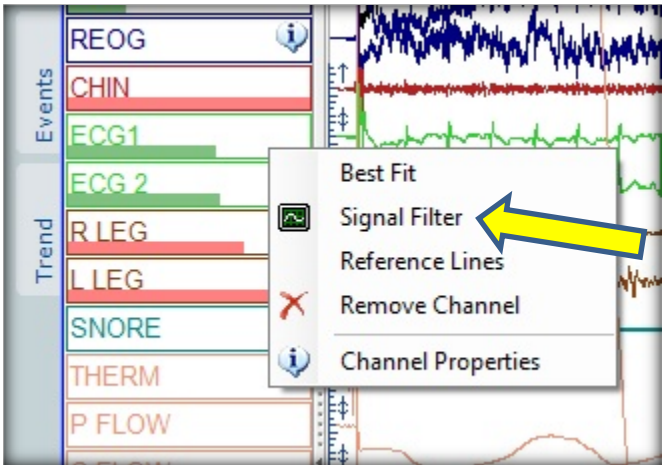
Most channels' wave forms can be automatically sized by using the best fit function: Right-click on the label, and select Best Fit.



PHILIPS

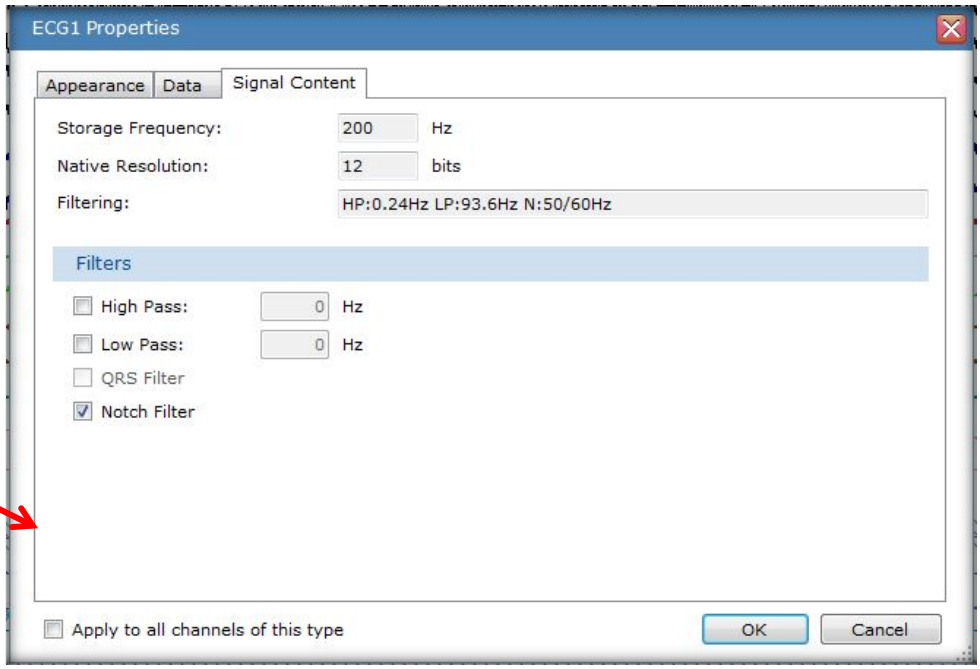
To Filter or Re-Filter a Signal

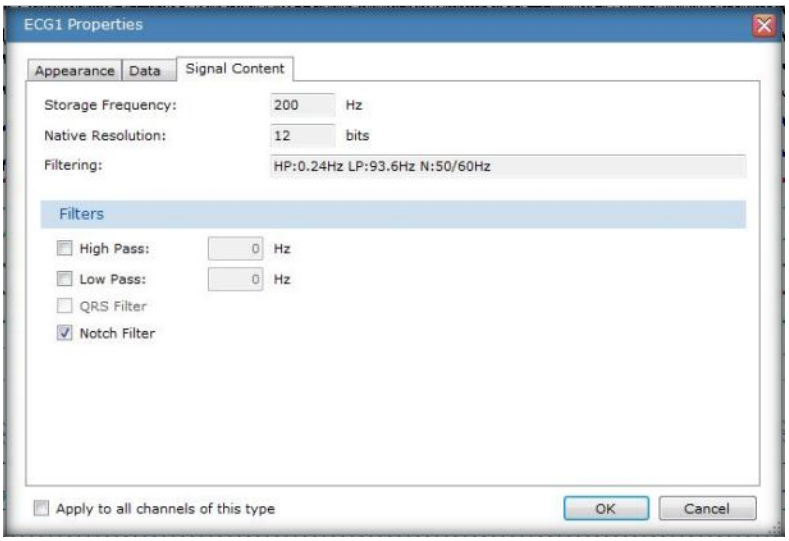
Place the cursor on the channel label (EEG,EMG,ECG,SNORE,EOG) and right click.



The channel's property window will appear.

Choose signal filter, and apply to all or one, as needed.



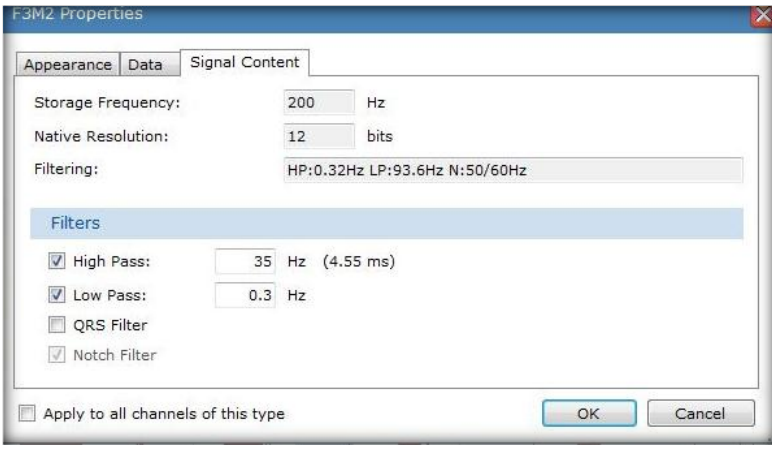


These filter changes can be saved with the workspace if desired. Again the label will have the "!" displayed next to it**.** **QRS or Notch filtering** may also be adjusted the same way.

Note:
A high pass filter is also known as a low frequency filter (LFF), and a low pass filter is also known as a high frequency filter (HFF).

A high pass filter allows higher frequencies to pass unchanged while attenuating lower frequencies.

A low pass filter allows lower frequencies to pass unchanged while attenuating higher frequencies.



PHILIPS

Filter Settings

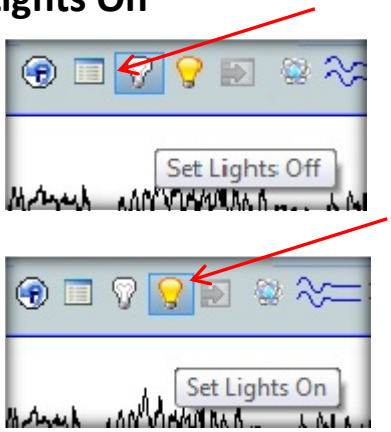
[Recommended per AASM Manual for Scoring Sleep, 2007]

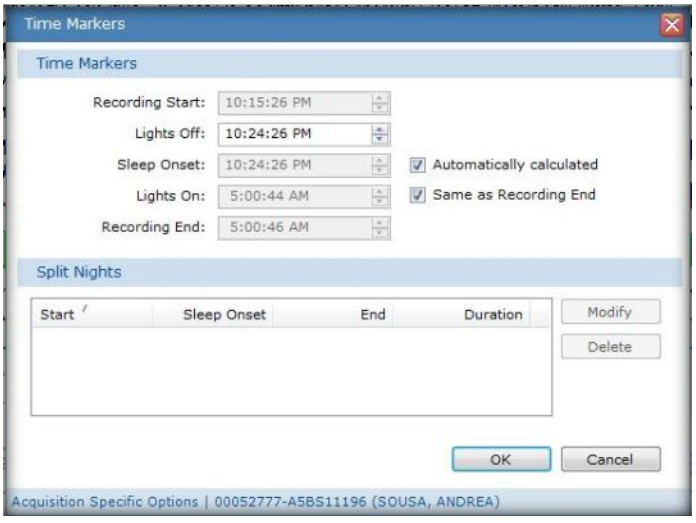
Routinely Recorded Filter Settings	Low Frequency Filter	High Frequency Filter
EEG	0.3 Hz	35 Hz
EOG	0.3 Hz	35 Hz
EMG	10 Hz	100 Hz
ECG	0.3 Hz	70 Hz
Respiration	0.1 Hz	15 Hz
Snoring	10 Hz	100 Hz

Lights Off – Lights On

Before you start staging the study, you should enter lights out and lights on.

These parameters may also be added during the acquisition. They can be set to automatically begin and end with the recording.





Sleep onset is automatically calculated as the first epoch of sleep. If you chose to edit the time, these are found from the top tool bar under Edit > Time Markers.

To score respiratory events, you can start at lights off.

From the Start Page tab, select the record to be scored.

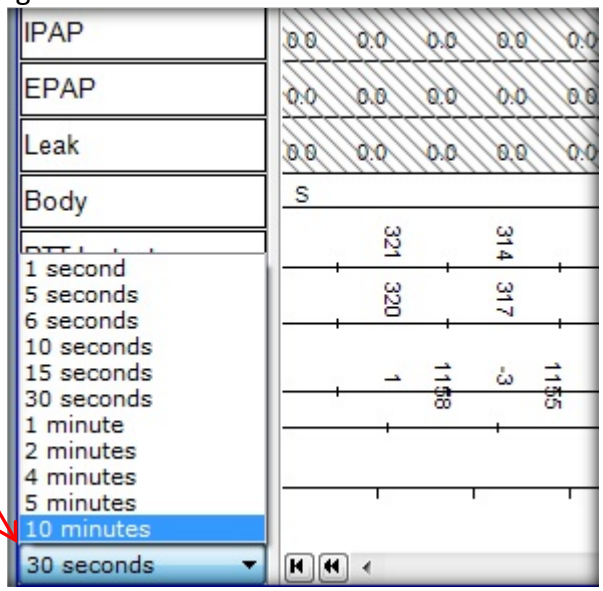
If you have not already loaded the workspaces you want, go to the top tool bar and select Workspaces. Then, load your workspace.

To change or enter a sleep stage, press the number that corresponds to the stage:
W (wake) = 0 or W
N1 (stage 1) = 1
N2 (stage 2) = 2
N3 (slow wave sleep) = 3
R (REM) = 5 or R

Information About Scoring Events

- Sleepware automatically deletes any events that are overlapped by manually scored events of the same family.
- You can score events while at any zoom setting.

- If you choose to look at the respiratory channels in another zoom setting, you can select a setting by using **CTRL + 1 for 15 sec., 2 for 2 min., 3 for 30 sec., 5 for 5 min., 6 for 60 sec., 0 for 10 min** or use the dropdown window.



- You cannot score events in periods marked as Wake unless you have configured Sleepware to do so. *Exception*: You can score events in the first 15 seconds of a Wake epoch that is preceded by sleep.

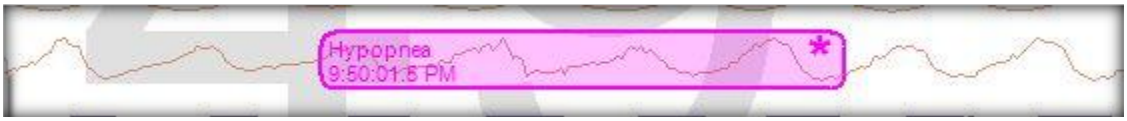
- You can score a respiratory event and arousal with a single mouse click-and-drag operation. When doing so, you can choose one of the following options:
    a) Central Apnea with Arousal
    b) Obstructive Apnea with Arousal
    c) Mixed Apnea with Arousal
    d) Hypopnea Apnea with Arousal

Each of these options results in the creation of two distinct events. The events are displayed in the standard manner as if they were created separately. The arousal event created has a default length of 3 seconds. The start of the arousal event will occur 1.5 seconds before the end of the respiratory event.

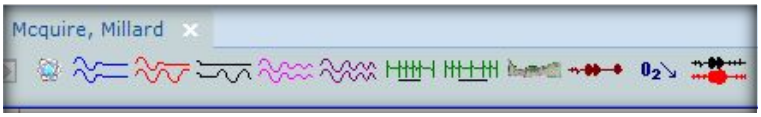
To Add an Event

To add an event, left click and drag mouse to highlight the event. A drop-down menu will appear allowing you to select an event.

See Set Scoring Styles for options, page 7.



- You can manually mark events by clicking on the appropriate icon from the Single-click Scoring toolbar.



Then, click in the raw data to add that event.

- You can use single-click scoring or use single-click scoring smart mode. You can have a single click icon active and still click and drag another type of event. For example, click and drag a respiratory event and single click the arousal.

The respiratory events are color-coded. Default colors are:

- *Central apneas (C) are* **blue.**
- *Obstructive apneas (O) are* **red.**
- *Hypopneas (H) are* ***light*** **purple.**
- *RERA (R) are* ***dark*** **purple.**
- *Mixed apneas (M) are* **black.**

To Delete an Event

The **DELETE KEY** is used to remove unwanted events.

To use it, click on the unwanted event, if it is not already highlighted.

Then, press the DELETE key. You can also right click on any event and delete all events of that type.

PHILIPS

Toolbars

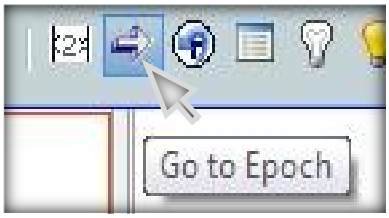
By default, several toolbars are displayed across the top of the acquisition tabs.

You can toggle the toolbars 'off' and 'on' using the **View > Toolbars** option from the Main Menu bar.

The available toolbars are listed below. Hover the mouse pointer over an icon on the toolbar to display a brief explanation of the icon.

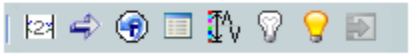
Main

Sleep Staging

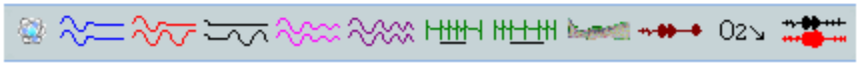


Event Validation

Raw



Single-Click Scoring

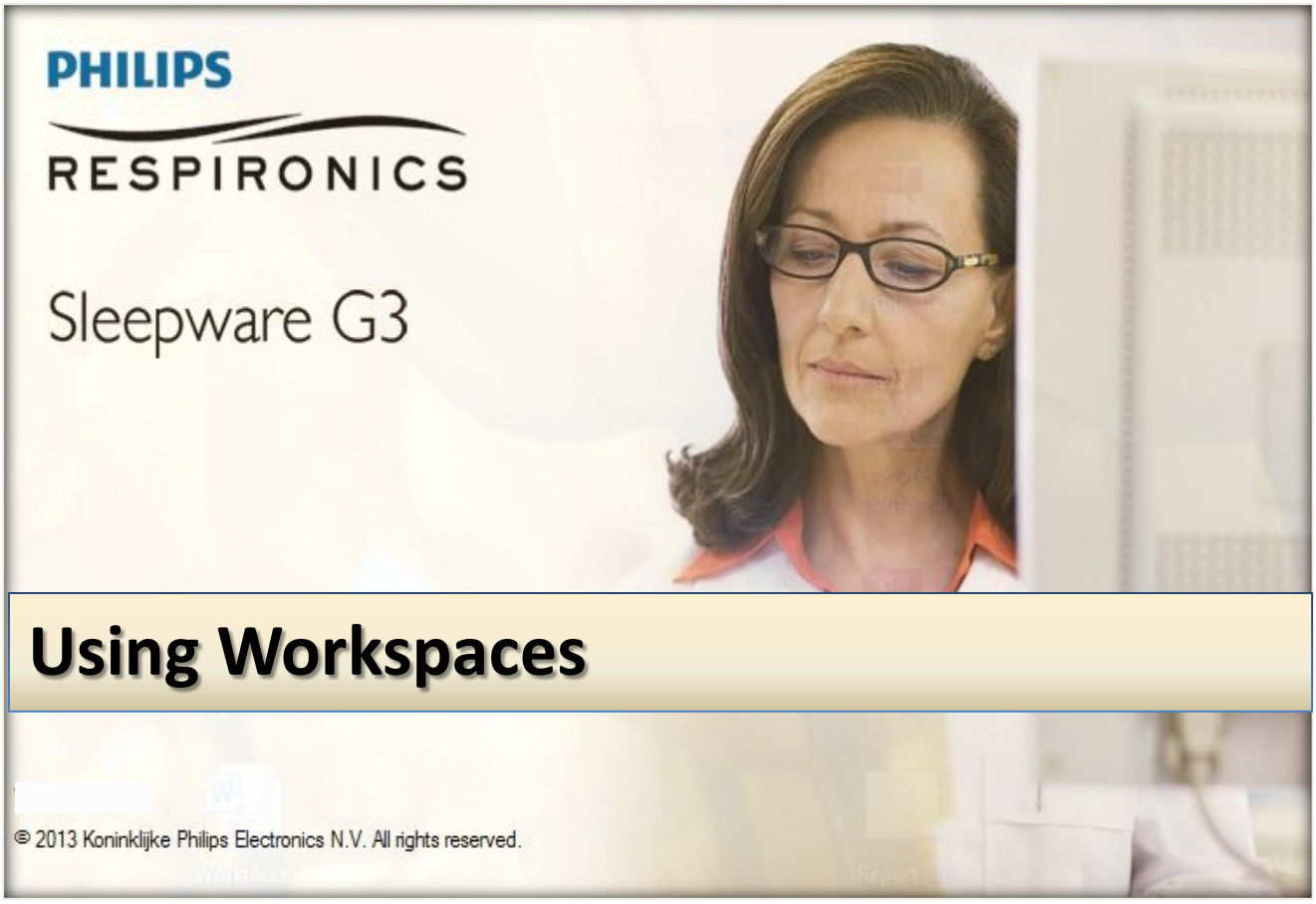


Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.

PHILIPS

G3 Training Module


PHILIPS
RESPIRONICS
Sleepware G3
Using Workspaces
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Workspaces

Workspaces consist of one or more panels. Typically, all panels in the workspace are dockable and synchronized.

- **Dockable** means the panels are docked inside a main window and do not float on the screen.

- **Synchronized** means that all panels are synchronized to the same point in time. All panels within the active workspace are synchronized and all panels for all open workspaces are synchronized.

Each workspace that is opened for an acquisition has a tab on the left side of the display. You can switch between workspaces by selecting the applicable panel (or using a predefined hot key).

Workspaces can be customized for individual users and automatically launched for specific logons, i.e. *John's login can have his workspaces automatically load, and Jan's login can have her workspaces automatically load.*

Workspaces are generally kept in a centrally located shared folder. The default location is C:\Users\(logonname)\Documents\Philips Respironics\Sleepware G3\DefaultSleepwareUser\Workspaces. The location is usually changed so that all users have access to the workspaces.

The location is usually a created folder on the computer that has the database. For example: \\room1\sleepwareG3\workspaces

Upon initial logon, you will need to go to Workspaces > Load, and point to that location.

You only need to do this the initial time you log onto Sleepware on any computer.

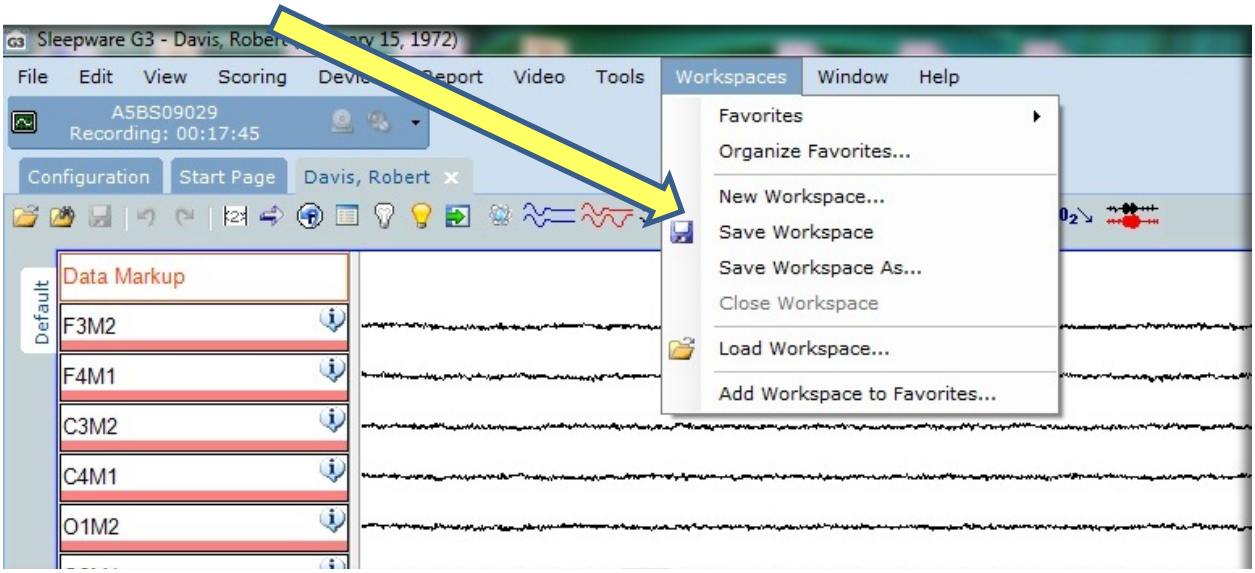
PHILIPS

Creating New Workspaces

The New Workspace window allows you to create a new workspace while viewing acquisitions. A new workspace tab is created and appended to the bottom of the existing tabs.

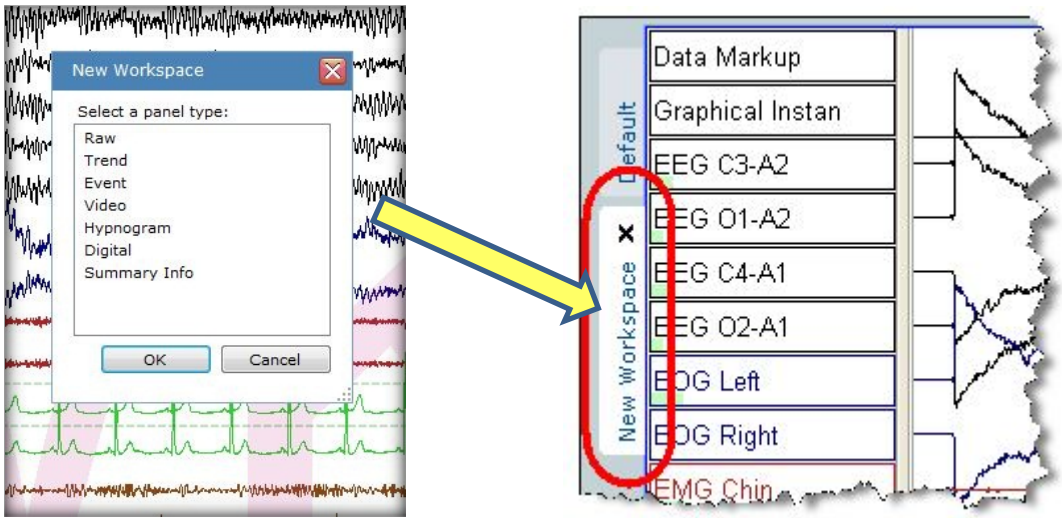
Follow these steps to create a new workspace:

1. With an acquisition open (in Live View or Offline), select Workspaces > **New Workspace** from the main menu bar.



The New Workspace window opens.

Select the panel type appropriate for the workspace and click **OK**.
A new workspace tab is created.



PHILIPS

Panel Types

Raw View Panel *(In Legacy Sleepware this is F4):*
The Raw View Panel displays the "raw" PSG channel data at various zoom levels ranging from 1 second to 10 minutes. A typical zoom level is 30 seconds, which equates to one epoch of the study.

Trend View Panel *(In Legacy Sleepware this is F3 or F5):*
The Trend View Panel displays the trended PSG channel data at various zoom levels ranging from 1 – 10 hours in 1-hour increments. An "entire study" zoom is also provided.

Trended data typically consists of a moving 6-second average of the data displayed in the Raw View Panel. This enables the data to be viewed for longer periods of time. Events are also displayed on the Trend Panel and a hypnogram can also be displayed on this panel.

Raw view and trend view channels can be further modified by deleting unwanted channels from view.

Video Panels

- There are two types of video panels: **Live View** and **Offline**.
- A live view video is used to display the live video feed from a camera. A live view video panel can either be **docked** or **undocked**.
- An **offline video** panel is used to playback recorded video and display video snapshots.
- **IMPORTANT TO NOTE**: You can only have one open workspace that has a video panel in it, so you may want to open the video panel after you open the workspace, rather than saving it in the workspace.

PHILIPS

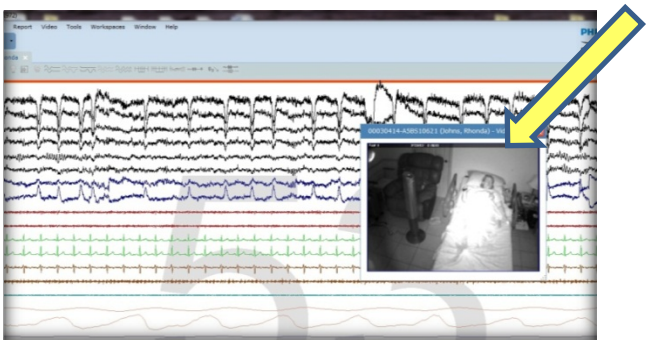
Docked Live Video Panel

When a docked video panel is present during an acquisition, it becomes a Live View Video Panel. A docked Live View Video Panel has the identical controls and functions that are described above for the undocked Live Video Panel. The only difference is the panel is docked.

During an acquisition, there can be only one docked video panel created. Once a video panel is present, you cannot add any more. If an undocked Live View Video Panel is open at the time an acquisition starts, the undocked panel stays open, and you are prevented from displaying and creating a docked video panel. This is because only one video panel is allowed at any given time.

Undocked Live View Panel

An undocked live video panel would typically be created prior to the start of an acquisition. This allows you to view the patient room before acquisition start. An undocked live view panel has the top priority of all windows so that it cannot be hidden.



Offline Video Panel

An offline video panel can be docked or undocked and remains synchronized with the other panels in the workspaces for an open acquisition. Only one offline video panel can be displayed at a time.

PHILIPS

Event View Panel

(In Legacy Sleepware this is F2)

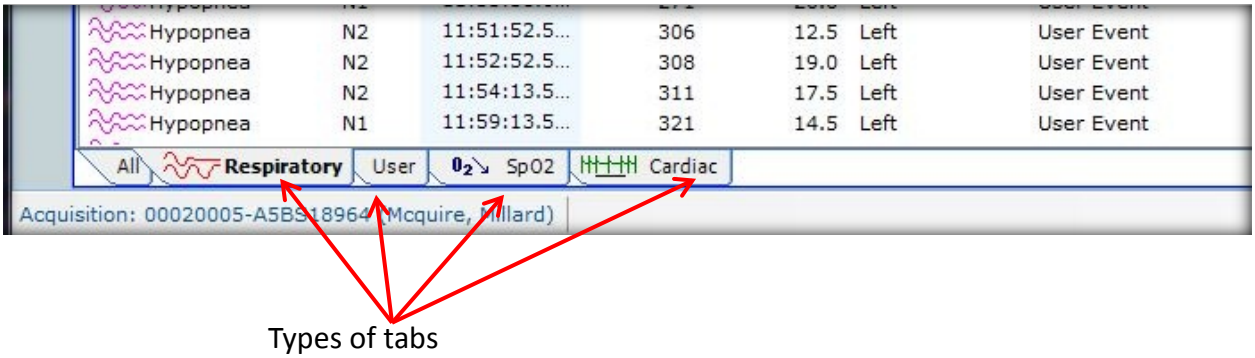
The Event View Panel displays events in a tabular format. You can select events in the panel and manipulate them. An event that is selected in this panel is automatically selected in other panels for other open workspaces.

Event Tabs

Event tabs allow you to quickly switch between multiple views of the event list. The tab control always has at least one tab. Tabs can be closed or added by right-clicking on the tab control.

There are three types of tabs:

- tabs that hold events of any type
- tabs that hold events from a specific family
- tabs that you can customize to hold only events of a specified type

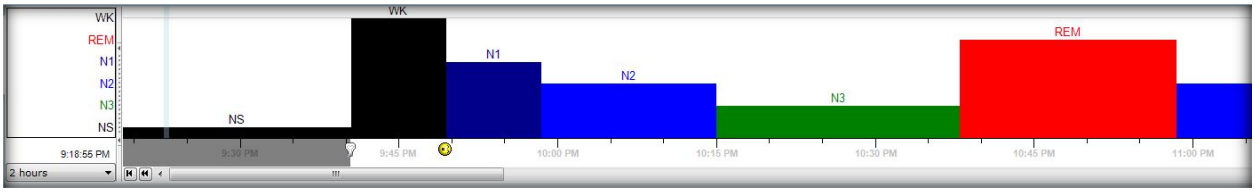


Types of tabs

Hypnogram Panel

The Hypnogram Panel displays the sleep stage data at various zoom levels including 5 minutes, 10 minutes, 30 minutes, 1-10 hours in 1-hour increments, and the entire study.

The hypnogram can be configured to remove the time scale and zoom controls. The label area can be removed thereby maximizing the available display space. The panel can also be undocked and resized for enhanced readability.



PHILIPS

Hypnogram Properties

You can enhance the appearance of the hypnogram by changing its display properties:

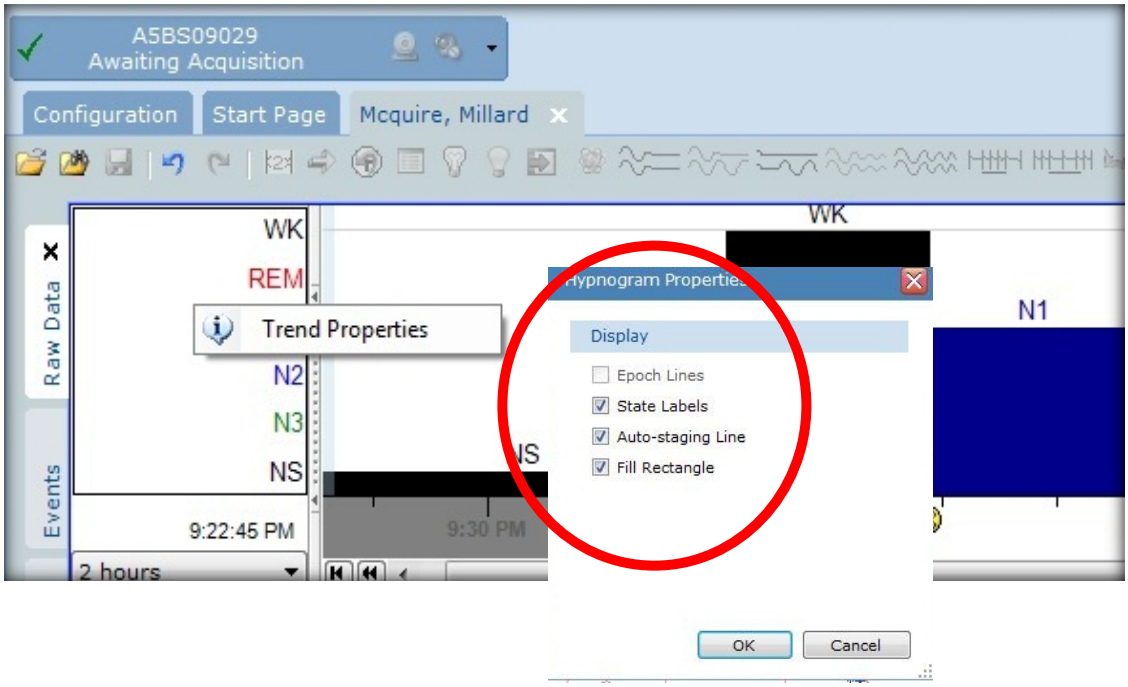
1. Place the mouse pointer in the sleep stage label area of the hypnogram and right-click. Then, click on the **Trend Properties** pop-up. The Hypnogram Properties window opens.
2. Select or deselect any of the properties shown.

Epoch Lines - (visible if the zoom level is one hour or less) Vertical lines signifying the boundary of an epoch.

State Labels - Adds sleep stage identifiers (WK, REM, N1, N2, etc.) atop each stage in the hypnogram.

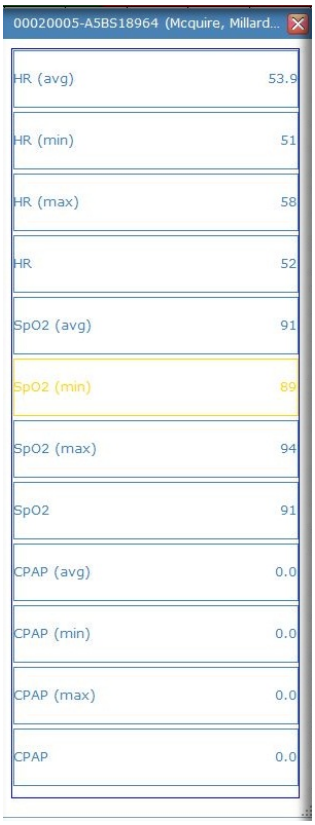
Auto-staging Line - Horizontal line depicting auto-stage results (if present).

Fill Rectangle - Fills the space under each stage with solid colors as assigned in the Sleep Staging window.



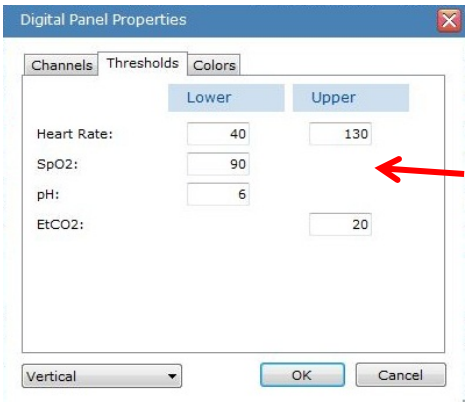
PHILIPS

Digital Data Panel



The Digital Data Panel shows the digital values of user-specified channels. This panel can be used in offline or real-time modes. In offline mode, the values in the panel are dynamically updated as you move through the data.

Each channel label in a box and the boxes themselves are equally sized either horizontally or vertically depending on the orientation of the panel. The Digital Data Panel can be undocked allowing you to have a small "floating indicator" on the computer screen.

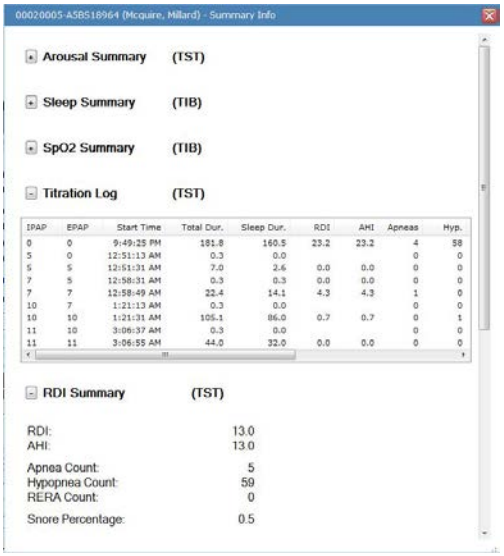


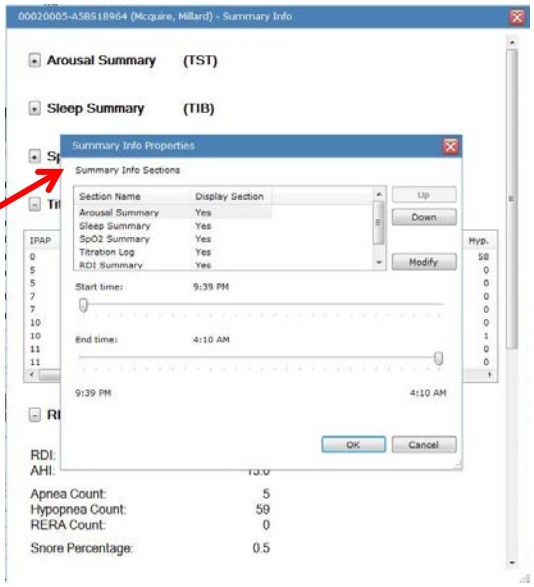
You can configure the data values to be used in a Digital Data Panel as well as certain thresholds and the colors associated with the thresholds.

The font size can be changed from the Configuration Tab.

Summary Info Panel

The Summary Info Panel displays the Titration Log and the RDI Summary table. This panel can be used in online or offline modes.





With the Summary Info Panel displayed, right-click anywhere on the panel and select **Summary Info Properties** from the pop-up menu.

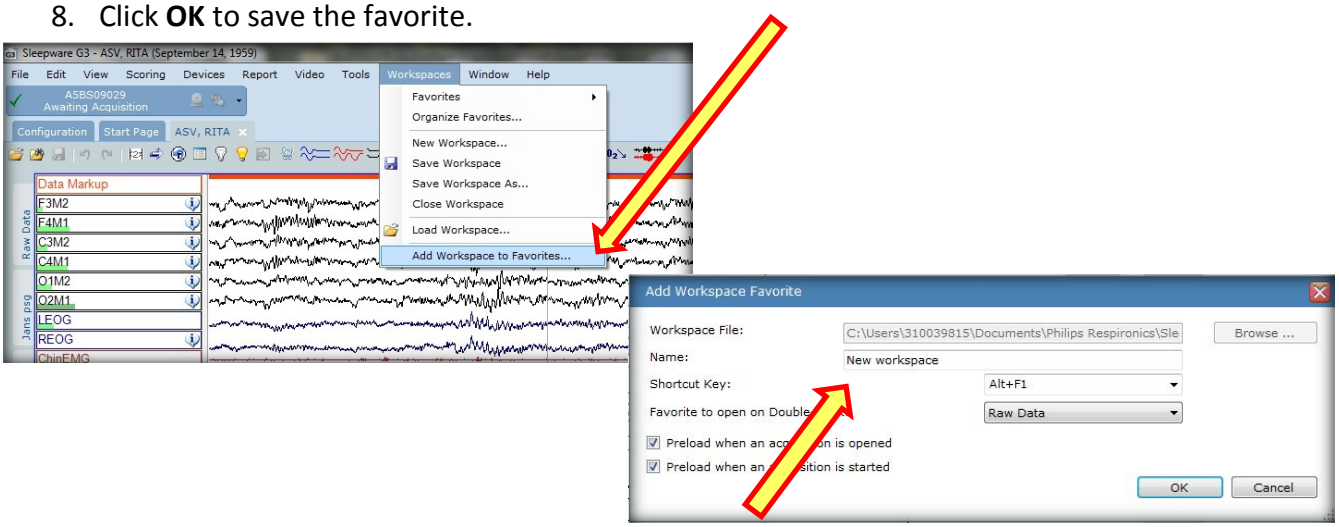
The Summary Info Properties window opens.

PHILIPS

Workspace Favorites

Add a Favorite

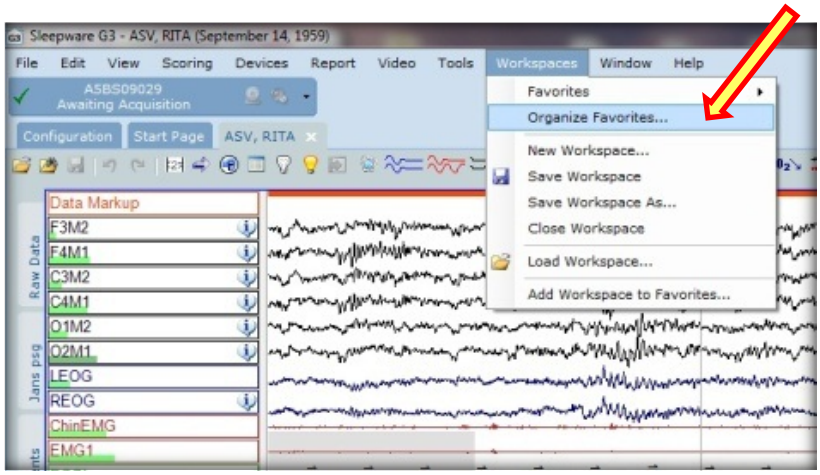
1. From the Main Menu select workspaces. Then select 'Add Workspace to Favorites…'
2. Click the **Add** button.
3. Enter a Name that is easy to remember.
4. (Optional) Select a **Shortcut Key** from the list. The default is None.
5. (Optional) Select a **Favorite to open on Double-click** from the list. The default is None.
6. (Optional) Click the **Preload when an acquisition is opened option**.
7. (Optional) Click the **Preload when an acquisition is started option**.
8. Click **OK** to save the favorite.



Organize Workspace Favorites

The Organize Workspace Favorites window allows you to view, add, modify, and delete workspace favorites. The window lists all of the workspaces that are designated as favorites. The favorites can either be internal or user modified.

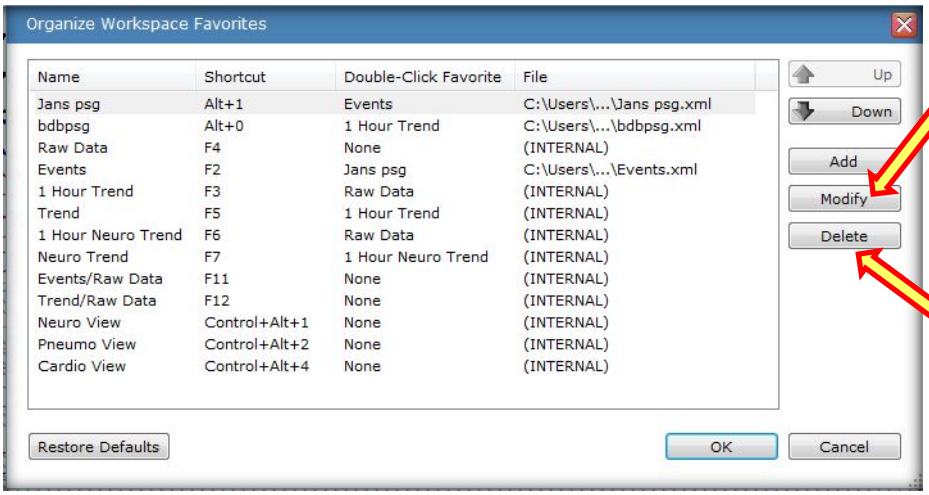
Favorites provide the ability to quickly find workspaces and to associate important properties with them such as double-click and preload properties.



PHILIPS

Modify a Favorite

1. From the Main Menu select workspaces. Then, select 'Organize Favorites…'
2. Then, select the workspace to be modified. Click the **Modify** button.
3. Enter a Name that is easy to remember.
4. (Optional) Select a **Shortcut Key** from the list. The default is None.
5. (Optional) Select a **Favorite to open on Double-click** from the list. The default is None.
6. (Optional) Click the **Preload when an acquisition is opened option**.
7. (Optional) Click the **Preload when an acquisition is started option**.
8. Click **OK** to save the favorite.



Delete a Favorite

1. Select a favorite and click the **Delete** button. The Workspace Favorite is deleted.
2. Click **OK** to save your changes

Consult the manual for additional information.

* *Note*: Screenshots are from the Sleepware G3 Software and Online Help.
* *Disclaimer*: Screenshots may change based on software version.