



Stratus EEG User Manual

Web Application

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Regulatory Compliance

K143487: FDA 510(k) Clearance for class II medical device.

Product: Stratus EEG (formerly Lifelines iEEG).



Stratus EEG bears a CE mark issued by BSI (CE 2797).

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In case you require this user manual in printed form, please contact your Stratus EEG Distributor. The user manual will be provided within seven calendar days.

Report suggestions or complaints by email: support@kvikna.com
Physician Support Contact: productmanagement@stratusneuro.com

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Device Description

This chapter describes the intended use, performance, and description of use of the Stratus EEG medical device.

Intended Use

Stratus EEG is an EEG system that allows acquisition, display, archive, storage and analysis of physiological signals.

The intended user of this product is a qualified medical practitioner trained in electroencephalography who will exercise professional judgment in using the information.

The Stratus EEG system also includes the display of quantitative EEG plots, such as power spectrum, which is intended to help the user to monitor and analyze the EEG.

This device does not provide any diagnostic conclusion about the patient's condition to the user.

Indication for Use

Stratus EEG is used as an aid in the diagnosis of neurophysiological disorders such as epilepsy.

Intended Patient Population

The intended patient population includes all age groups and any condition provided that it is possible to access the patient's scalp to apply electrodes.

Clinical Benefit

The clinical benefit of the Stratus EEG device is to aid the analysis of neurological disorders, such as epilepsy, by making recorded EEG measurements, acquired by an

EEG amplifier, available for review by a medical professional.

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician licensed by the law of the state in which he practices to use or order the use of the device.

Performance Characteristics

The Stratus EEG Analysis variant is used to manage and review EEG examinations. It works on data acquired by the Stratus EEG Acquisition variant as well as data from selected third-party EEG equipment that is imported into the system. The EEG is presented in a conventional way and conventional signal processing is applied such as re-montaging and band pass filtering. The system is also capable of presenting digital video synchronized to the EEG if this is available. Furthermore, it offers spectral analysis in the form of trend analysis on user-selected sections of EEG.

Essential Performance

The medical device is intended to be used as a tool to aid diagnosis of neurological diseases such as epilepsy. It does not provide life-support functions or monitoring of vital physiological signs. The symptoms to be diagnosed and treated are not acute in the sense that delay in the measurement will not result in harm to the patient. However, incorrect output from the device could lead to an inappropriate treatment that would present an unacceptable risk to the patient.

Therefore, the Essential Performance of the device is to deliver accurate data in the following ways:

- Correctly interface to the EEG amplifier and write the data to file.
- Correctly read the data from the previously written file.
- Correctly process the data according to the specification given by the operator.
- Correctly display the data according to the specification given by the operator.
- Associate the data with the correct patient.

Stratus EEG Analysis

Stratus EEG Analysis is used to manage and review EEG examinations. It is used to manage patient demographics, keep track of exams and manage user access to clinical data.

Exams can be opened for review and analysis of EEG data by clinical experts. The user can navigate within the EEG that can be many hours long, filtering and re-montaging as desired. Furthermore, the artifact removal feature can be used to automatically filter artifacts from the EEG. If video data is available, it can be shown synchronized to the EEG traces. Sections of relevance are manually marked by the user, and the relevant sections are archived for long-term storage.

Disclaimers and Warranties

The information in this section is subject to change without notice.

Except as stated below, Kvikna Medical ehf (Kvikna Medical) makes no warranty of any kind with regard to this device, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Kvikna Medical shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this device.

Kvikna Medical shall not be liable for any loss, damage, or injury resulting from misuse, accident, modification, tampering of data, improper operating environment, improper maintenance, or damage caused by using Stratus EEG with a product for which Kvikna Medical is not responsible. Such misuse will void the warranty.

Kvikna Medical does not warrant uninterrupted or error-free operation of its products.

No other party is authorized to make any warranty to assume liability for Kvikna Medical's products. Kvikna Medical will not recognize any other warranty, either implied or in writing. In addition, services performed by someone other than Kvikna Medical or its authorized agents or any technical modification or changes of products without Kvikna Medical's prior written consent may be cause for invalidating this warranty.

All warranties for third-party products used within the Stratus EEG system are the responsibility of the relevant manufacturer. Please refer to the relevant documentation on each product for further details.

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Compliance

Stratus EEG is designed to comply with the following medical regulations and standards.

Regulations and Directives:

EU Medical Device Directive 93/42/EEC

US Code of Federal Regulations Title 21, Chapter 1, Subchapter H – Medical Device Regulation 207/2012 on eIFUs for medical devices

Standards:

EN ISO 13485:2016	Medical devices – Quality management systems - Requirements for regulatory purposes.
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IEC 62304:2006/Amd1:2015	Medical device software – Software life cycle
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processes.

IEC 82304-1:2016	Health software – Part 1: General requirements for product safety.
IEC 62366-1:2015/AMD1:2020	Medical devices Part 1 – Application of usability engineering to medical devices.
EN ISO 14971:2019	Medical devices – Application of risk management to medical devices.
IEC 80601-2-26:2019	Medical electrical equipment – Part 2-26: Particular requirements for the basic safety and essential performance of electroencephalographs.

Safety and Warnings

Warnings are directions which if they are not followed can cause fatal or serious injuries to a user, engineer, patient or any other person or can lead to a mistreatment.

WARNING: Safety of the Stratus EEG service cannot be ensured unless it is provided by Kvikna Medical or an authorized agent. Stratus EEG is a medical device compliant with medical safety standards and it is forbidden to tamper with or modify the software.

WARNING: Stratus EEG is intended to be installed, used and operated only in accordance with the procedures given within this manual and accompanying documentation for the purpose for which it was designed. Nothing stated in this manual reduces the user's professional responsibilities for sound judgment and best practice.

WARNING: Users shall only install, use and operate Stratus EEG in such ways that do not conflict with applicable laws or regulations which have the force of law.

WARNING: Use of Stratus EEG for purposes other than those intended and expressly stated by the manufacturer, as well as incorrect use or operation, may relieve the manufacturer or his agent from all or some of the responsibility for resultant non-compliance, damage or injury.

WARNING: Stratus EEG is intended to be used by a healthcare professional.

WARNING: Stratus EEG is intended only as an adjunct device in patient assessment; it must be used in conjunction with other methods of patient diagnosis. Stratus EEG is not to be used for the determination of brain death.

WARNING: Stratus EEG is not intended to be used as a vital signs monitor.

Residual Risks

WARNING: An inherent consequence of using computer devices is that hardware or software issues may occur. However, unexpected issues have a low chance of affecting the safety of the device.

WARNING: Care must be taken to insert correct values into the reporting interface (patient folder) to avoid incorrect diagnosis.

WARNING: Heed all instructions, recommendations or warnings included in the software, this manual and 3rd party documentation. Failure to do so can lead to:

- loss of data
- incorrect display of EEG data
- exam or report mix-up
- unauthorized access of data
- using the ME system as a vital signs monitor
- incorrect spike & seizure interpretation

Contra-indications

No contra-indications are considered to prevent usage of Stratus EEG.

Undesireable Side-effects

No side-effects are considered to result from using Stratus EEG.

Use with Other Equipment

No other medical device or patient-connected device is used with the Stratus EEG Web variant.

WARNING: Non-medical equipment, when used with the system, should comply with IEC/ISO safety standards relevant to that equipment. IT equipment should comply with the relevant standards.

Useful Lifetime

The useful lifetime for the Stratus EEG software is 5 years.

IT Equipment

Refer to the respective manuals of all IT equipment for information concerning use with other equipment, interference, maintenance and cleaning, disposal, and environmental parameters for operation of those devices.

Reporting Incidents

In the event of a malfunction or change in performance of the Stratus EEG device that may affect safety, send a report to support@kvikna.com

In the case of a serious incident that has occurred in relation to Stratus EEG device, report to the manufacturer and the competent authority of the member state in which the user of the device and/or patient is established.

Warning Symbols



Additional warnings are indicated by this symbol elsewhere in this manual.

System Requirements

Supported Web Browsers

- Google Chrome (Version 86.0.4240.183 or higher) 64-bit

Hardware Requirements

- Processor: 2.0GHz
- Memory: 4GB
- Screen Resolution: 1920 x 1080

Antivirus Requirement

Compatible antivirus protection with default configuration of firewall and real-time protection.

Network Requirements

The table below represents the network requirements for optimal communication with a Stratus EEG Server.

Bandwidth (Throughput)	Upload: 5 Mbps Download: 20 Mbps
Accessible Firewall Ports	HTTPS/443, HTTPS/8443



Warning: Failure to provide a network that meets the above minimum network requirement may lead to a delayed diagnosis for the patient.

LDAP Configuration

Communication between the Stratus EEG Server and LDAP server is via port 389.

Viewing IFUs in Electronic Form

- Operating System: Windows, Linux and Mac operating systems.
- Processor: 1 gigahertz (GHz) or faster processor or SoC
- RAM: 1 gigabyte (GB) for 32-bit or 2 GB for 64-bit
- Hard disk space: 16 GB for 32-bit OS or 20 GB for 64-bit OS
- Graphics card: DirectX 9 or later with WDDM 1.0 driver
- Display: 800 x 600

Acceptance Test

Before performing this acceptance test, ensure this computer meets the minimum requirements.

- Open Google Chrome Web browser.
- Navigate to Stratus EEG Server URL.
- Fill in the login credential (Username and password) and click Login.
- Navigate to the Upload tab and click the Files button.
- Select a compatible test exam (EEG + Video).
- Click Open and Next.
- Select "Enter New Patient".
- Fill in all Patient demographic information and click Next.
- Fill in all Exam related information and click Next.
- Leave the default Access right and click Next.
- Click Upload and monitor the progress to completion via the Task tab.
- Navigate to the Patient Visits tab.
- Select the previously uploaded exam and review the data.
- Make sure it is possible to play the video.
- Add an event to the exam.
- Close and reopen the exam to verify that the changes were indeed saved.

Connections Diagrams

There is no connected equipment included with the Stratus EEG Web variant.

Symbols Glossary

Symbols Defined in EN ISO 15223-1:2016



Manufacturer

Indicates the medical device manufacturer, as defined in EU Directives 90/385/EEC, 93/42/EEC and 98/79/EC.



Serial Number

Indicates the manufacturer's serial number so that a specific medical device can be identified.



Consult instructions for use

Indicates the need for the user to consult the instructions for use.



Caution

Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.

Symbols to Demonstrate Compliance with the MDR



Medical Device (Currently undergoing ISO process)



Unique Device Identifier (Currently undergoing ISO process)

Compatible File Formats

Stratus EEG is compatible with the following file formats:

- Stratus EEG (.keeg)
- Stratus Extended EEG (*.keegz)
- Lifelines iEEG (.ieeg)
- Lifelines Extended iEEG (.ieegz)
- Biosemi Data Format (.bdf)
- European Data Format (.edf)
- Nervus/Profile (.eeg)
- Nicolet (.e)
- XLTek (*.erd)
- Nihon Kohden (.eeg)

Accompanying Documentation

For installation of the server and other administrative functions, refer to the **Stratus EEG Technical Manual**.

For Acquire and Team Monitor systems, see the **Stratus EEG User Manual** for Acquire.

This Manual

This manual covers the use of the web-based Stratus EEG system.

Updates

Although the manual is accessible via a link on the web application header bar, it is separate from the application itself. Therefore it may be updated independently of the application. The date of the latest update is posted on the first page of the document.

Search this Manual

If you don't find what you are looking for on the side menu, you can also search the contents of this manual by using the search function of your browser. This is usually Ctrl+F on Windows and cmd+F on a Mac. Type your search term into the field that appears, usually at the top or bottom of the browser window, and press enter.

Printer-friendly Pages

Printer-friendly pages of the manual can be printed by using your browser's print command. You can choose to print selected pages or the whole manual. When the whole manual is printed, the menu will appear only once near the beginning, and not on every page.

Definitions

Before delving into the details of each feature of Stratus EEG, here is a short description of some of the concepts and terms we will be referring to. Some of these are user interface items you will see as you begin using the software.

Patient Visits

Patient Visits are managed automatically by the system. Users cannot specifically add, update or delete visits. When a patient is admitted into the system, a new Visit is created and a new exam is initiated. Subsequent exams are added to the current visit if the user creating or importing them has full access to the visit. Otherwise a new visit is created.

A visit is considered completed once all the exams contained in the visit have been archived. If the patient is re-admitted after the visit has been closed, a new visit is created. In short, each patient in the database can be associated with more than one visit, and each visit can contain several exams.

Patient Database

The Patient Database includes all available patients in the system, past and present plus their demographics. Patients are identified by a distinct Patient ID. The Patient Database is automatically searched when admitting a patient to the system, when uploading an exam, and when reassigning an exam to another patient.

Exams

All information and collected data associated with a clinical test make one exam, including reports, external files and workflow state. Each exam is identified by a distinct Exam ID.

Recorder ID

In addition to Patient ID and Exam ID, we will also be referring to Recorder IDs. This is a number or designation to identify the recording device and/or area in which the

recording was made. The Recorder ID could be a name or number that refers to the acquisition device, or you may wish to use a bed or room number as your Recorder ID. Each Recorder ID will be associated with an actual acquisition device (computer name), as well as with a default exam type and a Site. Recorder IDs and computer names are defined by the account administrator during setup configuration, but admins can later [edit the Recorder ID](#).

Workflow

Each exam type is associated with a customizable Workflow, which includes several stages beginning with Initiate and ending with Archive. The Workflow State refers to the step in the workflow that is in progress or most recently completed.

Permissions

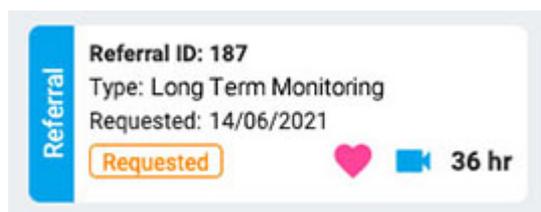
Permissions are granted to patient visits by user group, and the permissions apply to every exam included in the visit. Individual users can belong to more than one group. When a user admits a new patient or creates a new exam where a new visit is created, the current user's default group is given full access to the new visit. Users are only aware of groups they are members of, while administrators have access to all groups.

Sites

Sites are useful for separating large cloud accounts into smaller sections by location, building, or even by department. This has several benefits, including the ability to delegate exam reporting between sites and facilitate cooperation in monitoring patients. Sites are defined by the account administrator during setup configuration. Admins can then associate each user to a site, and can assign a Site Admin to each site. Patient Visits are assigned the site of the user initiating the visit.

Patient Visit List

The Patient Visit tab displays a list of patients in the database with exams grouped by visit. Patient names are shown on the left, and each horizontal row represents one patient visit. Each visit contains one or more "cards" with each one representing one exam. If no exam card has been created yet, a Patient Referral card may show instead. These cards are distinguished by a blue tab on the left of the card containing the word "Referral", as shown below.



An arrow to the right of the exam cards indicates that more exams exist in the visit. Press this arrow to view additional exams.

Note: See the Definitions tab for an explanation of how Stratus EEG defines visits.

Sort List

The visit list can be sorted by various criteria using the sort buttons at the top of the list. Press the button twice to sort in the other direction.

Search and Filter

Above the visit list is a search field plus various filters which allow you to display only exams that meet the selected criteria. You can also select the "Assigned to me" checkbox to show only those exams, or the "Include archived" box to show archived as well as current exams.

The filter icon is highlighted in green when anything in the search and filter area is selected. Press the green icon to clear the filters.



Refresh

Press the refresh icon to reload the visit list with the most recent patient visit info.



Exam and Referral Cards

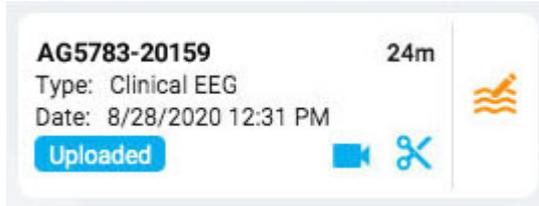
Each exam card displays some basic information about the exam: ID, type, start date and time, and length of exam if it has been recorded. Icons at the bottom indicate

whether the exam includes video or has been pruned, and on the bottom left is the workflow state.

Referral Cards show requested date, state of the referral, and also whether cardiac monitoring has been requested with a heart icon, in addition to video.

Review and Retrieve

If the exam has been recorded and uploaded to the system, the workflow state is highlighted in blue and the Review button (on the right) is activated. By pressing the review button, you can open the test for review in a new browser tab. See the [Review section](#) for a complete description of reviewing an exam.



If the exam has already been archived, the Review button is replaced by a Retrieve button. The exam must first be retrieved before it can be reviewed again.



List View

At the top left of the visit list is a button for displaying the visit list as a standard list. The main difference between list view and card view is that you will not see any exams until you select a visit to open the patient folder.



Patient Folder

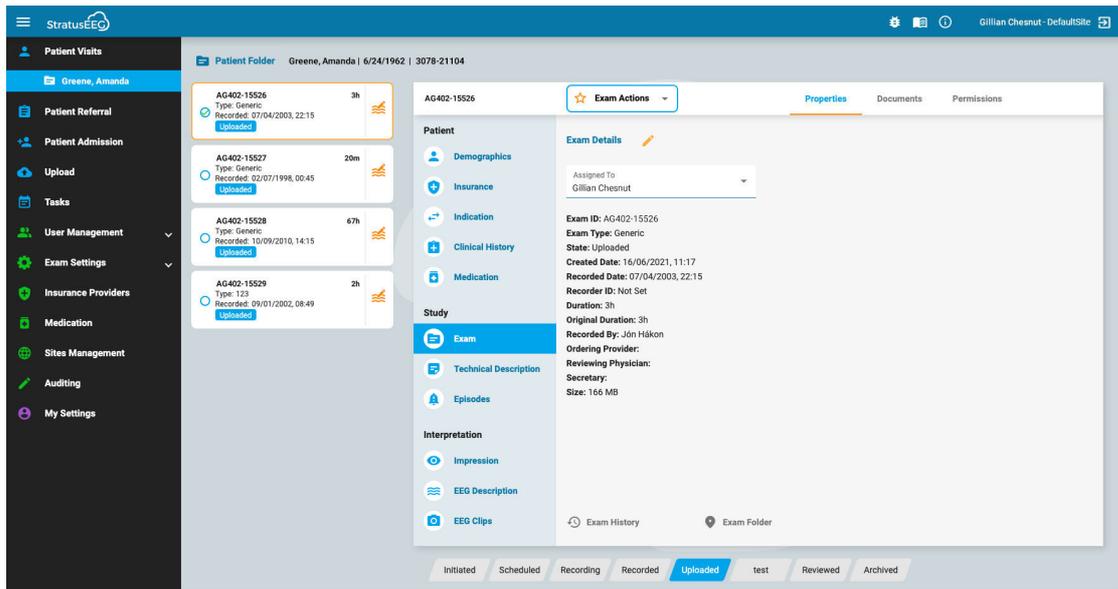
Open the Patient Folder

Press anywhere on a row on the patient visit list to open the patient folder page for that patient. If you press on a particular card in the row, you will open the patient folder with that exam or referral selected, otherwise the first card on the list will be the selected one.

The patient's name appears on the main menu under Patient Visits. Press Patient Visits again to return there and close the patient folder. Any other menu item will also close the patient folder.

Patient Folder Layout

The patient folder is headed with the name, date of birth and ID of the selected patient. Below that on the left are the exam/referral cards, and to the right is an area containing the details about the patient, exams and more. Below the details area is the workflow bar. The image below shows the patient folder with the top exam card selected.



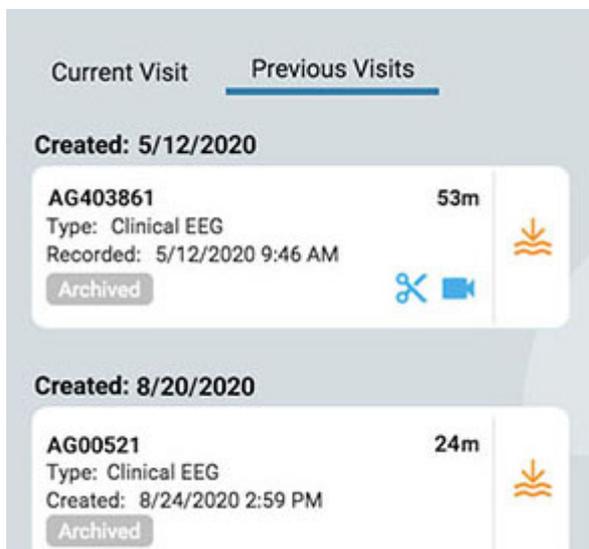
Exam/Referral Cards

The exam and/or referral cards are located in a list on the left of the patient folder, with the selected card highlighted with a yellow outline. Click any card to make it the selected one. Selecting a card allows you to see and edit details about the exam or referral and also perform actions such as generating reports or cancelling referrals.

Note that the [Review and Retrieve buttons](#) work here the same as they do on the visit list.

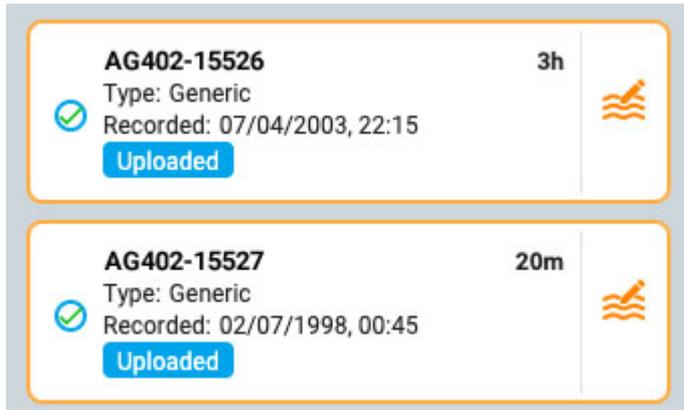
Previous Visits

If a previous visit exists for that patient, it is also accessible here via a tab, headed by the date the visit was created.



Multiple Selections

The selected exam is highlighted with a yellow outline. If you press on another exam, it becomes the selected one and the first one is deselected. You can select multiple exams at one time by clicking the checkbox circle on the left side of the exam card. This can be handy if you want to perform an action to several exams at once. Deselect multiple exams by pressing the background of one card.



Workflow Bar

The workflow bar shows the current state of the selected exam or referral card at a glance.



Patient Folder Details

To the right of the exam/referral cards is a "window" area with a header containing the ID of the selected exam or referral card. To the right of the ID are the Action buttons or menu (depending on whether the selected card is an exam or referral card), and to the right of that are 3 tabs: Properties, Documents, and Permissions. These items will all be explained in more detail below.

Actions Menu and Buttons

When a referral card is selected, you will see two action buttons on the header to the right of the referral ID: Generate Exam and Cancel Referral. Generate Exam creates an initiated exam card using the order details in the referral. Cancel Referral cancels the referral and removes it from the visit list, never to be seen or heard from again.



When an exam card is selected, the Exam Actions menu appears on the header to the right of the exam ID. Use the options on this menu to perform actions on the selected exam(s). A description of the options follows.

Exam Actions





Preview Report: Use this action to preview the default report for the selected Exam, based on Exam Type. You will be able to sign the report preview if you want to. A report preview that is not signed is not saved to the Documents tab, but you can preview the report as many times as you need. If you sign the report preview, the signed version will be added to the Documents tab for you to view or download. If no default report is defined for the Exam Type, you will have to choose which report to generate.



Generate Report: This option allows you to create a new report associated with the exam that is based on an existing report template that you can choose from a drop-down menu. The information in the report is drawn from the information on the [Properties tab](#). The generated report will appear on the Documents tab.



Delete: This option deletes the selected exam or exams. You will be asked to confirm this action.



Merge: Select two or more exams to activate this option, which merges the exams into one exam. You will be asked to confirm this action.



Reassign: This action is used to reassign the exam to another patient, in the case that the exam was mistakenly assigned to the current one. A search tool appears so you can select the correct patient, and you will be asked to confirm this action in the next step. If you can't find the patient on your first search, clear the filters by pressing the green filter button and try another search criteria.



Export: Use this action to export an exam to another file format. You will be asked to select the file format, whether you want to include video and attachments, and whether the exam should be anonymized. If Anonymize is left unchecked, personal information will be included with the exam.

Go to the Tasks tab (on the main menu) to check the progress of the export and to download the exam when the task is complete.

Note: Please see the ["About Stratus to Go"](#) section below before choosing this file format for export.



Archive: Perform this action after an exam has been reviewed and is ready to be archived. After archiving, the exam will have to be retrieved before it can be reviewed again.



Detection: Use this option to perform spike and seizure detection on the selected exam.



Delete Video: Perform this action to delete video permanently from the exam. If the exam was recorded with dual video, you can choose to delete only one of the videos, or both.



Send Exam Link: Choosing this option will send a link by email to your chosen recipient giving them temporary access to an exam. A popup appears where you fill in the recipient's name, email, the access level you want them to have, the expiry date (within a one-month limit), and a message to the sender. Press Send to send the email.

About Stratus to Go

The Stratus to Go option exports the exam in a read-only Windows version of the Review client. This is useful to be able to send the exam to someone who does not have the client installed. The recipient can review the exam and view the patient demographics.

The recipient of the exam will be prompted to calibrate their monitor before reviewing the exam. Follow the instructions on the Calibration tab using a ruler as a guide to adjust the virtual rulers on the screen.



WARNING: It is important to calibrate the screen so exams can be interpreted correctly. The screen calibration must be performed for every new computer screen. It is important that the recipient of a Stratus to Go file is made aware of this warning.

Properties Tab

When the patient folder is opened, the properties tab is automatically selected in the details section of the page. The properties tab contains information about the patient and currently selected exam. This information is used both for reference, and also when generating reports.

The menu along the left side is divided into sections for Patient, Study and Interpretation. The patient section includes information pertaining to the entire visit, while the Study and Interpretation sections refer to the currently selected exam card. If a referral card is selected, some of the study menu items will be grayed out, and the referral details are displayed instead.

Read-only View

Some of the information on the properties tab will already be filled in, for example, the demographics may be filled in when the patient is admitted or when a referral is created. When information is already filled in, the read-only view of that page is shown, but you can always edit the information by clicking the yellow pencil icon.

Editable View

For pages that are not yet filled in, the editable view is displayed. When editing a page, you must always click Save at the bottom of the page to save the information. The saved information is used when a report is generated.

Access from Review

An abbreviated version of the patient folder is also accessible from Review. This is so reviewers can fill in the interpretation section while reviewing the exam. See the [patient folder section](#) in the Review part of the manual.

Properties Tab Menu

Following is a description of the pages on the Properties tab, which are accessible via the menu. The more information that is completed on these pages, the more complete the generated reports will be.

Demographics



The Patient Demographics page holds the patient information, including identity, biometrics and contact info. The info on this page may already be filled in when the patient is admitted or when a patient referral is created. To edit or add information, click the yellow pencil icon. After making your changes, click Save.

Insurance



The Insurance page contains the patient's or other insured party's insurance details, plus a form to upload an image or .pdf file of the insurance card. To upload a file, click the browse button to browse to a file on your computer, then press the Upload button. Be sure to save any changes made to the page.

Indication



This page shows the reason for the test, plus the corresponding ICD-10 code(s). If the page is in read-only view, press the pencil icon to edit. Choose an indication from the Indication dropdown list. Select a code from the ICD-10 Codes dropdown list. This will add it to a list, and you can then add another code if you wish. You can search the list by typing in a search code or key word. Remove a code from the list by clicking the X to the right of the code. Remember to press Save when you have made any changes.

Clinical History



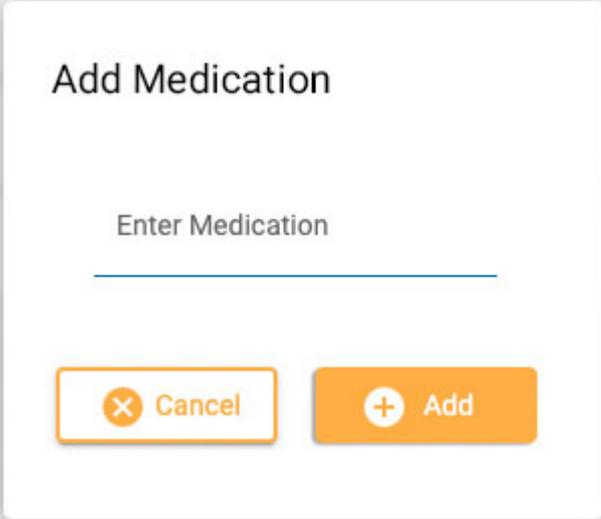
This page contains a free text field where the patient's clinical history can be typed or pasted in. Click the pencil icon to edit the page, then Save to save any changes.

Medication



This page contains a list of the patient's medications. To add a medication, click the pencil icon if you are on the read-only view. Select a medication from the dropdown list of approved medications.

If the medication you want to add is not on the list, select "other" and a popup appears where you can type it in. Click the Add button to add it to the list.



The image shows a white dialog box titled "Add Medication". Inside the dialog, there is a text input field with the placeholder text "Enter Medication". Below the input field, there are two orange buttons: one with a white "X" icon and the text "Cancel", and another with a white "+" icon and the text "Add".

Be sure to click Save after making any changes. An administrator will see your added medication and can choose to confirm it to the active list. Whether this happens or not, the medication will still appear on that patient's medication list.

Exam



This page contains details about the exam itself, such as Exam Type or Duration. The read-only view of this page does have one editable item on it: the Assigned To field. To edit any of the other items, click the pencil icon.

Referral



This page contains details about the patient referral, such as ICD-10 Codes or Monitoring Type. Click the pencil icon to enter the editable mode.

Technical Description



The technical description details the parameters of the recording, such as number of electrodes and whether video or EKG were included. Click the yellow pencil icon to edit the page.

Episodes



The page displays a list of seizure and patient entered events, with details and notes. Sort the list to show only seizure or only patient events by using the filter options. Click

the yellow pencil icon to edit or add notes, or to change whether the event was typical or not. Remember to click Save to save your changes.

EEG Description



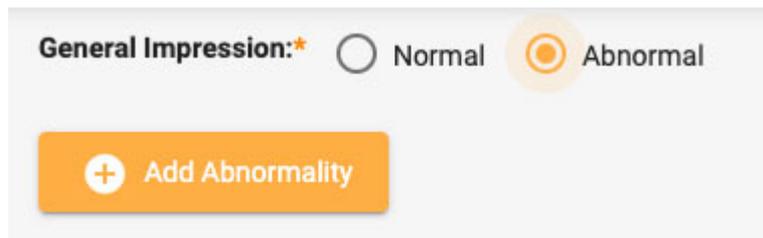
This page is for documenting a description of the EEG, including posterior dominant rhythm and other observations such as sleep pattern, hyperventilation or artifacts. The information in the posterior dominant rhythm section is filled in when a PDR event is placed in the exam during review. Other details can be filled in by answering multiple choice questions. There is also a free text field to add any additional information that may aid in interpretation of the EEG. To edit this page, click the yellow pencil icon. Remember to click Save after making any changes.

Impression



This page is for documenting the interpretation of the exam. If the general impression is normal, select the Normal option and type in any additional notes you may have in the Impression text field before pressing Save.

If Abnormal is selected, you have the option of adding more details by pressing Add Abnormality.



You are then presented with the following dialog where you can select details about the abnormality. The head diagram is clickable if you need to pinpoint one or more areas of the brain. When you are done, click Ok, and you can either add another abnormality, or add more information in the Impression text field. Then press Save.

Abnormality: Slowing Interictal Discharges Seizures

Prevalence:

Wakefulness: Awake Asleep Both

Location:

- Generalized
- Lateralized Left
- Lateralized Right
- Focal
Select area(s) on brain



EEG Clips



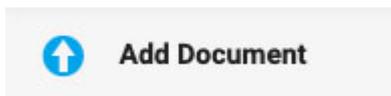
This page shows a list of any EEG screenshots which were captured during review, with date and time of capture and any annotations that have been added. From the read only view, you can view or download the clips using the eye or the down arrow icons. Press the pencil icon to edit or add an annotation, or to press the trash can icon to delete the clip.

Edit EEG Clips

Date/Time	Annotate	
28/06/2021, 14:48	annotation	

Documents Tab

Documents and reports are displayed on the documents tab as "cards", similar to the exam cards. Referrals appear on the documents tab as soon as they are generated using the Patient Referral tool. Exam Reports are added when they are generated using the Generate Report option of the Exam Actions menu. Documents can also be uploaded from your computer using the Add Document button.



Each card has buttons to view, update/regenerate, or delete the document.

View



Viewing a document opens a popup window where you can also download the document.

Update/Regenerate



This button will either update a document or regenerate a report. The button for update or regenerate looks the same, but will show a different tooltip. If the document is a text file that was uploaded from your computer, then you will be asked to browse to a new file to upload. If the document is a report generated by using the exam actions "generate" option, then the report will be regenerated. Both actions will replace the current document with the new one. Should you not want to replace the document but keep both copies, then simply use the Add Document button or the Generate option on the Exam Actions menu instead of the Update/Regenerate button.

Delete



Press the delete button on any document, and it will quietly go away. But not before you confirm that you really want it to go though!

Sign



If the document is a referral that has not been signed, a sign button appears. Press the button to sign the document. After signing, the document is labelled "Published".

Permissions Tab

On the Permissions tab, you can view and edit the current permissions to the visit. Note that permissions apply to every exam in the visit and not only the selected exam.

101 Exam Actions Properties Documents **Permissions**

User Group Access Level + Add

User Group	Access Level	
Default	Access Level Full Access	✕
Intermittent2	Access Level Analysis	✕

✕ Cancel Save

Add a Permission

To add a permission to the list, select a User Group from the drop-down list, then the Access Level and press Add.

Change Access Level

To change the access level that is currently applied to a group, select a new one from the Access Level drop-down next to that group on the list.

Remove a Permission

To remove a permission, simply click the X on the line you want to delete.

Save

Remember to press Save to save your changes.

Patient Referral

The Patient Referral tool is used to order an EEG exam. When you open this tab, a page appears with a series of steps along the top, as shown below.



When a step is completed, a yellow Next button is activated at the lower right of the screen, allowing you to advance to the next step. All required fields (those denoted by a yellow asterisk) must be filled in before advancing to the next step.



As you go through the steps, the step you are on is highlighted in yellow. The completed steps will appear with a blue checkmark as shown below.



A back button appears at lower left of the screen in case you want to fix something on the previous screen. You can also click the completed blue icons at the top of the screen to go back to any previously completed page. You will also get the chance to review and edit every step on the last step, the Summary page.



When all steps have been completed, you can then create the referral. This button appears at lower right when you have reached the Summary page. Read on for a more detailed description of each step.



Search

The first step is to search the database for the correct patient by using the search fields. If the patient is not found on the first try, you can try another search criteria by clicking the funnel icon (which will be highlighted in green) to clear the search.

Note: It is sometimes better to use only one search criteria at a time, as mismatched info may not give you the results you want.

If the patient is not found, click the blue Enter New Patient button to advance to the next screen. If the patient is found, select it on the list to highlight it, and then click Next at the bottom right of the screen to advance to the Patient Demographics page.

Search for Patient

Stratus Patient Id Date of birth

First Name Last Name

Patient Id	SSN	Last Name	First Name	Date of birth
AG101		Greene	Amanda	
QP-Order-193		Greene	Amanda	3/21/1962

Select a patient and press Next.
If Patient is not found, press Enter New Patient.

Patient Demographics

This page holds the name and contact details of the patient. If you selected a patient on the previous screen, then some of the details will already be filled in.

If the patient is the primary contact, check the checkbox and the rest of the fields become grayed out. If the patient is not the primary contact, then fill in the details of that person, and select an option in the Relationship dropdown box.

Identity

First Name Last Name

Middle Name Date of birth

Street Address City

St... Zip Code Email

Primary Phone Mobile

Other Phone Mobile

Primary Contact

Patient is Primary Contact Relationship *

First Name * Last Name *

Email *

Primary Phone * Mobile

Other Phone Mobile

Insurance

If the patient's (or insured party's) insurance card is available as an image or .pdf file, you can upload the file to the patient's folder by using the upload tool. Browse for the file on your computer and click Open, then click the yellow Upload button to attach the file. The file name will appear below with an X on the right. Click the X to remove the file. You will also see the file when you arrive on the Document Upload step. After the referral is created, the file will be visible in the patient's folder.

Upload insurance card (front and back):

image.png

Fill out the details of the patient's insurance on this page. If the patient is not the insured party, fill in the name and date of birth of the insured person. If it is the same as the primary contact indicated on the previous page, check that checkbox.

Insurance

Not Insured

Primary Insurance Carrier * Advantage Health Solutions	Member ID * 40102	Group ID 4001
Secondary Insurance Carrier	Member ID	Group ID

Fill out if the patient is not the insured party:

Insured is same as Primary Contact

Insured First Name	Insured Last Name	Insured Date of Birth * <input type="text"/>
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Study

Here you can fill in the details of the exam itself. Start by selecting an Ordering Provider. (If you are the ordering provider, this will already be selected). Then chose a reason for the test from the Indication list. Next, select your ICD-10 Code(s). Begin typing a code or key-word to search the list. Since the descriptions are long, they are cut off on the dropdown list, but if you mouse over the descriptions, you will see the full description.

ICD-10 Codes

- G40.201 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes ...
- G40.209 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes ...
- G40.211 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes ...
G40.209 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, not intractable, without status epilepticus
- G40.219 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes ...
- G40.309 Generalized idiopathic epilepsy and epileptic syndromes, not intractable, without sta...
- G40.319 Generalized idiopathic epilepsy and epileptic syndromes, intractable, without status ...

After selecting a code, it will be added to a list below with an X to the right. Click the X to remove a code.

ICD-10 Codes

ICD-10 Codes *

Code	Description	
G40.001	Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, not intractable, with status epilepticus	✕
G40.019	Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, intractable, without status epilepticus	✕

On the right side of the page, please indicate whether a routine EEG has been performed within the last year. If so, you will upload the results of that exam on the Document Upload page in the next step.

Next, you can indicate what exams you want performed. If a routine EEG was not performed within the last year, then this will be required now. If Long-term EEG is checked, you need to indicate whether video or monitoring should be included, and select the duration of the exam.

If you want to include cardiac monitoring, check that option and indicate the type and duration. When you are finished, click Next to proceed to the Document Upload page.

Document Upload

On this page you can add files to the patient's folder, such as chart notes or other documents. If an insurance card was uploaded on the Insurance step, then you will see it listed here. If you checked that a routine EEG was performed in the last year in the previous step, then you should upload the chart notes here.

To upload a document, click Browse to find the file then click open. Select the document type, then press Upload. The document appears in a list below with an X to the right. Click the X to remove the document.

Browse File Document Type * Upload

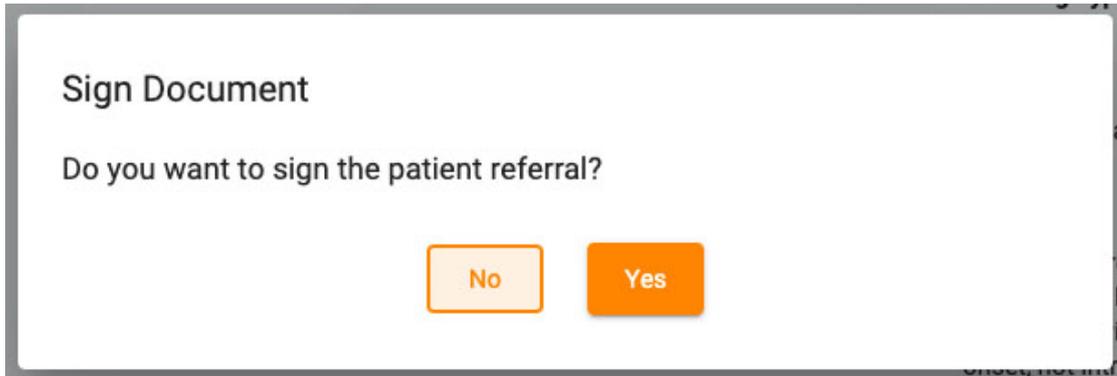
Type	Name	
Insurance Card	image.png	✕

Summary

The summary page displays all the information entered on the previous steps, with a yellow edit button (pencil icon) beside each section. Click the pencil to go back to that step if you need to correct something. If everything looks good, you can press Create Referral at the bottom right.



The referral is created and you are then asked if you want to sign the document. Click Yes to sign the referral.



Patient Admission

Use the Patient Admission tab to enter a new patient into the database, or to initiate a new exam with an existing patient. Along the top of the screen, you can see the steps you need to complete with a Next button at the bottom right to advance to the next step.



Search

You must always begin with searching the database, as the patient may have been previously entered. Enter one or more search criteria into the fields. If some matches are found, they will appear on a list. If the patient is found, select it on the list and press Next.

Search for Patient

Patient Id Date of birth

First Name Last Name

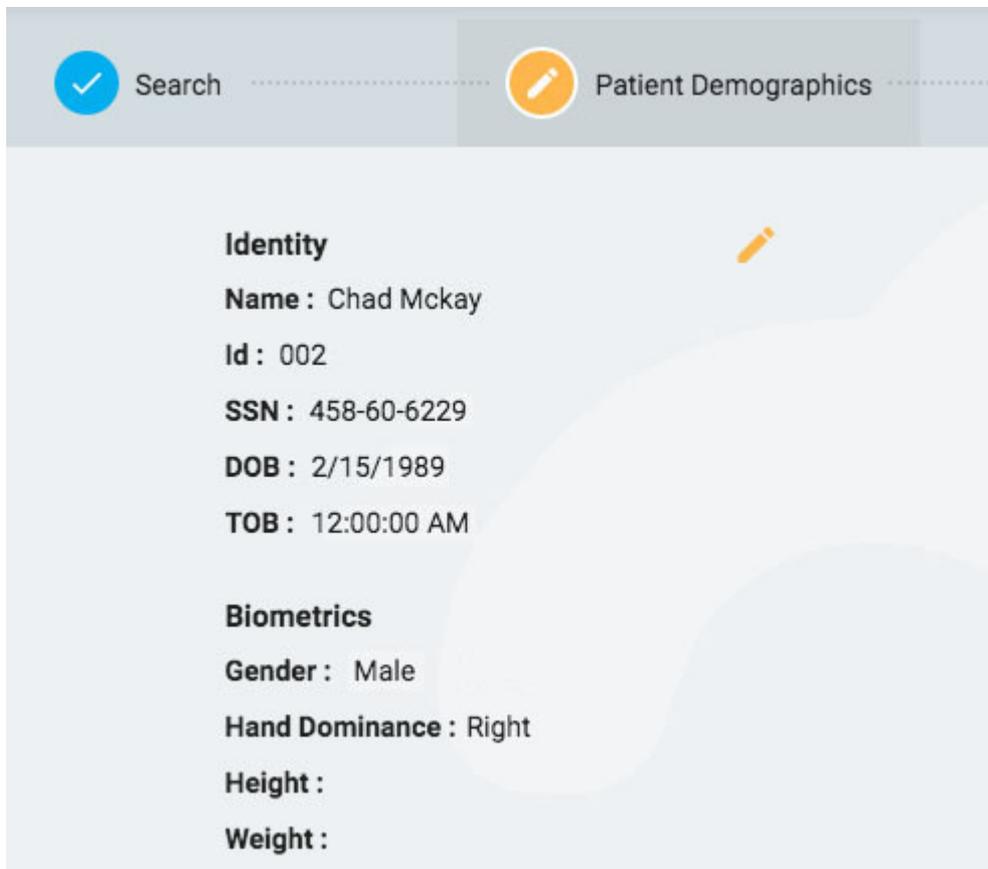
Patient Id	SSN	Last Name	First Name	Date of birth
002	458-60-6229	Mckay	Chad	2/15/1989
4031	505-26-1212	McNerny	Mary	12/16/1932

Select a patient and press Next.
If Patient is not found, press Enter New Patient.

If the patient is not found, you can try again by pressing the filter button to clear the filters and enter a new search criteria, or you can press the Enter New Patient button to create a new patient record.

Patient Demographics

If you selected a patient from the list, the patient demographics will be filled in with the information about patient you selected, with the option to edit or update the info by clicking on the yellow edit button (pencil icon).



Search Patient Demographics

Identity

Name : Chad Mckay

Id : 002

SSN : 458-60-6229

DOB : 2/15/1989

TOB : 12:00:00 AM

Biometrics

Gender : Male

Hand Dominance : Right

Height :

Weight :

If you arrived on this page by pressing Enter New Patient, you will see a form where you can fill in the information about the patient.

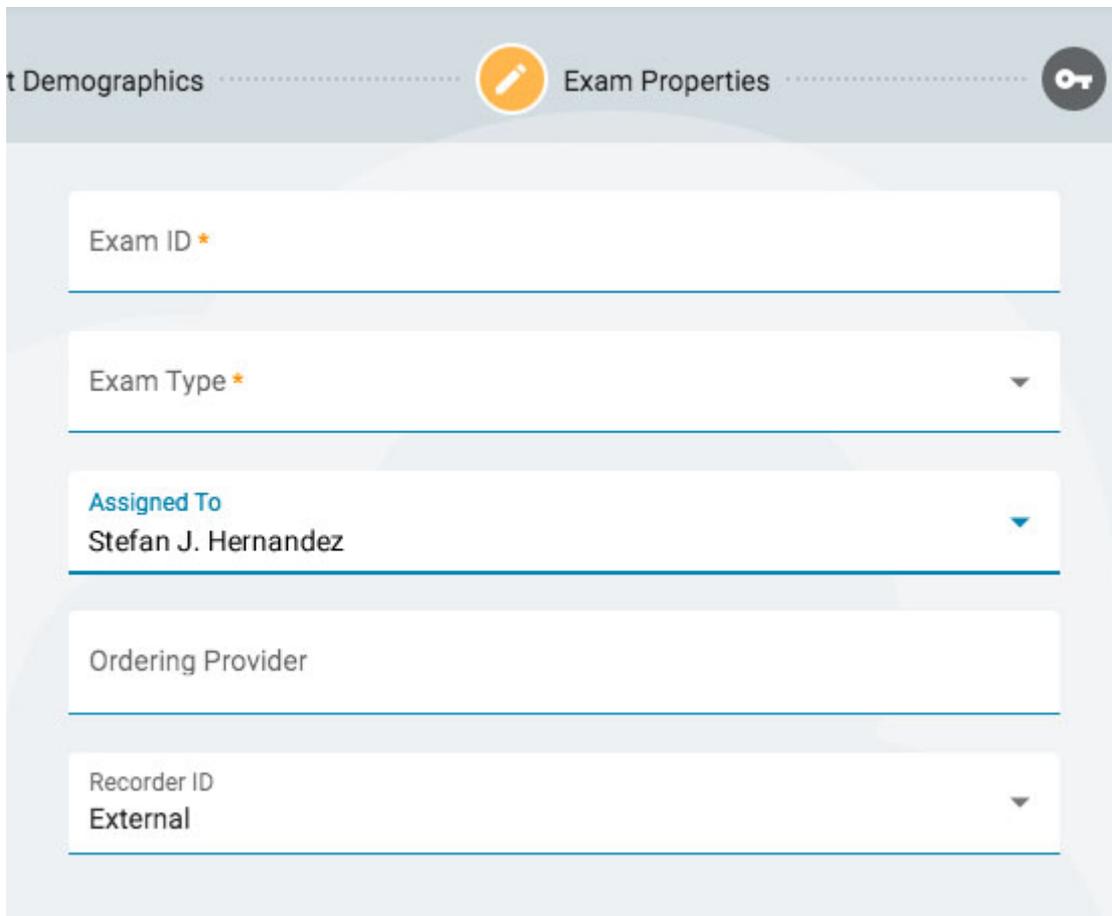


WARNING: It is important to enter the correct ID associated with the patient so exams can be interpreted correctly.

Press Next to continue.

Exam Properties

Choose an Exam ID and Exam Type, and any of the other optional details you wish.



Demographics Exam Properties Key

Exam ID *

Exam Type *

Assigned To
Stefan J. Hernandez

Ordering Provider

Recorder ID
External

Press Next to continue.

Permissions

If the patient already has a patient visit started, you may see several permissions already on the list. If the patient is new, or if the patient's previous visit has been archived, only the default permission will be listed. It is important to know that permissions apply to every exam in the visit, and not only the current exam.

On this page, you can add, remove, or change the access level of permissions, just as you can do on the [Patient Folder Permissions tab](#).

When you are finished, press Next to continue.

Summary

Here you will see a summary of all details pertaining to the admitted patient, with the option to edit any details before pressing Finish to complete the process.

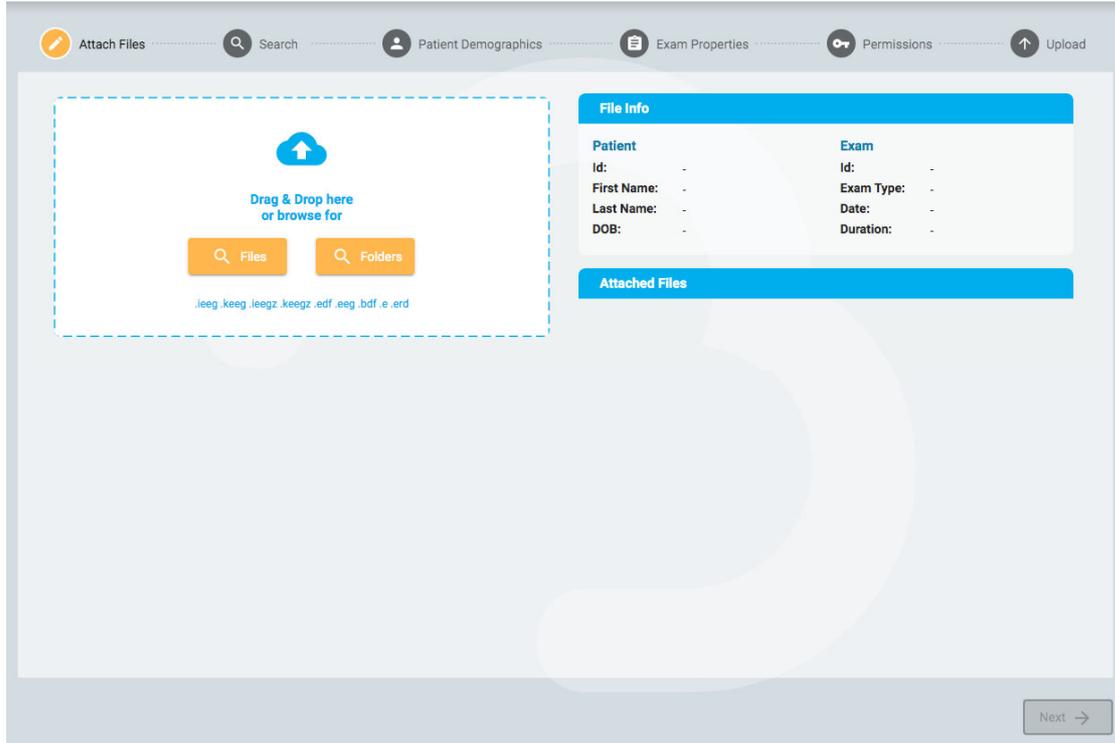
Upload

The Upload tab is used to upload exams that were recorded on an Acquire or other device. The look of the upload page is very similar to the Patient Admission page, with steps to follow in a row along the top and a Next button at the bottom to proceed through the steps. The main difference is the addition of a page before the search step

to attach the files you want to upload. Another difference is that the "summary" page is called Upload, as it is on this final step that you start the actual upload of files.

Attach Files

Here you can either drag and drop files or a folder, or you can press a button to browse to the files or folder you want to attach. The info on the file is displayed below and the files themselves are listed on the right.



Press Next to continue to the next step. See the section above, [Patient Admission](#), for a description of the following steps: Search, Patient Demographics, Exam Properties and Permissions.

Upload

The final step, Upload, shows a summary of all the previous steps, including the files that have been attached. Press the Upload button at the lower right to complete the upload. A progress bar appears on the page, or you can also follow the progress on the Tasks tab.

The Cancel button will cancel the entire process and send you back to a blank Attach Files page.

Tasks

Some operations performed in Stratus EEG can take some time. You can track the progress of operations such as exporting or uploading exams, seizure detection and archiving on the Tasks page.

Task Name	Patient ID	Exam ID	Date Started	Task Progress	Task Status	
Export Exam	21887-3210	218874001	1/28/2010	<div style="width: 100%; height: 10px; background-color: green;"></div>	100%	Completed 
Delete Video	44300-2404	443003108	1/28/2020	<div style="width: 100%; height: 10px; background-color: green;"></div>	100%	Completed
Upload Exam	26674-8823	266742010	1/28/2020	<div style="width: 40%; height: 10px; background-color: green;"></div>	40%	In Progress
Export Exam Can't export an exam that has no path. More >>	10023-1812	100230222	1/27/2020	<div style="width: 0%; height: 10px; background-color: gray;"></div>	0%	Failed  
Seizure Detection	11220-5659	232355038	1/27/2020	<div style="width: 80%; height: 10px; background-color: green;"></div>	80%	In Progress

If an operation fails, an explanation appears below the task name, and buttons appear to either retry or cancel the operation.

When an exam is exported, a download button appears to download the exam.

Monitoring

The Monitoring page gives an overview of exams that are currently being monitored. You will notice four tabs located on the top right of the page, with the Overview tab being the first.

Overview

The Overview page gives a visual overview of all exams currently being monitored, sorted by user group.

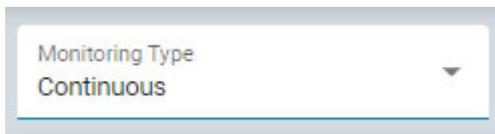
The blue header of each group shows the user group name, and below that are the names of the monitoring techs assigned to that group. Below that is a chart that displays each patient name, a countdown timer, the recorder ID and the patient ID.

MUG397			
Stefan Hernandez Nicole Jenkins			
Patient Name	Timer	Recorder ID	Patient Id
1 Jennifer Knowles	00:29:26	Acq001	JK3002145
2 Sara Adams	00:43:11	Acq002	SA4002928
3 Charlotte Lowe	00:48:16	Acq016	CL2110020
4 Ava Hopkins	00:55:22	Acq018	AH6288911

Any exams that are waiting to be assigned appear in the Overflow queue above the groups.

Overflow:	Ashton Doyle, AD3966802 David West, DW3090871
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It is possible to switch between monitoring types by using the selection box at the top of the screen. The screen will then display only groups of that type.



The browser window needs to be refreshed every so often to make sure you are seeing the latest assignments to each group. Use your browser's reload button or keyboard shortcut to do so (often Ctrl+R on Windows and cmd+R on Mac). The minutes since the last page refresh is displayed at the top right of the monitoring screen.

Patients

The Patients page shows a searchable, sortable list of all patients being monitored. Search by text string, or filter by monitoring type or exam type. Press the green filter button to clear all filters. You can manually change the Monitoring Group that the patient has been assigned to using the drop-down list. This will override the automatic assignment.

 A screenshot of the 'Patients' page in the application. It features a search bar, filters for 'Monitoring Type' (set to 'Continuous') and 'Exam Type', and a green filter button. The main table has columns for Exam ID, Patient ID, Last Name, First Name, Start Time, Exam Type, Monitoring Group, Monitoring Tech, and Recorder ID. Three rows of patient data are visible.

Exam ID	Patient ID	Last Name	First Name	Start Time	Exam Type	Monitoring Group	Monitoring Tech	Recorder ID
453-6022139	AH3002145	Hopkins	Ava	9/11/2020 11:17 AM	Video Ambulatory	MUG397	Stefan Hernandez	Acq001
602-3002323	CL4002928	Lowe	Charlotte	9/11/2020 11:10 AM	Video Ambulatory	MUG397	Stefan Hernandez	Acq002
601-3992019	SA2110020	Adams	Sara	9/11/2020 11:05 AM	Video Ambulatory	MUG397	Nicole Jenkins	Acq016

The list can be sorted by the different criteria shown at the top of the list — just click the headers to sort, and click a second time to reverse the order of the sort. Change the monitoring group of the patient with the drop-down list. You can view the members of the group by clicking the yellow icon to the right of the drop-down. The Monitoring Tech column shows the tech who is currently monitoring the patient.

Monitoring Techs

The Monitoring Techs page works similarly to the Patients page, except the searchable list shows users who have been assigned to monitoring groups. Users can be reassigned to another monitoring group on this page, and you can see the login status of each user.

 A screenshot of the 'Monitoring Techs' page. It includes a search bar and a 'Role' filter. The table lists users with columns for Full Name, User Name, Role, Monitoring Group, and Status. Three users are listed: Stefan Hernandez (Physician), Nicole Jenkins (Technologist), and Claire Johnston (Technologist).

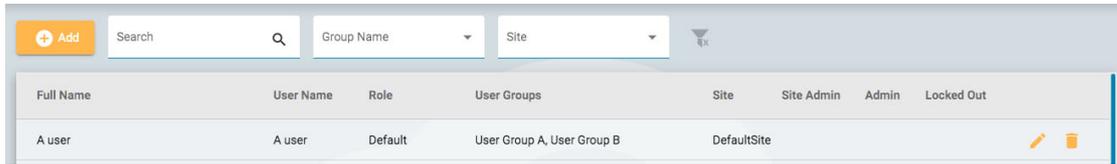
Full Name	User Name	Role	Monitoring Group	Status
Stefan Hernandez	StefanH	Physician		Logged in
Nicole Jenkins	Nic.J	Technologist		Logged in
Claire Johnston	Claire	Technologist		Logged out

Logs

The Logs page keeps a searchable log of the date and time of all exam assignments, whether automatic or manually assigned.

Users

The Users page holds a searchable and sortable list of all users in the system. The table displays the user's full name, user name, role, user groups and site.



Full Name	User Name	Role	User Groups	Site	Site Admin	Admin	Locked Out
A user	A user	Default	User Group A, User Group B	DefaultSite			

Icons indicate whether the user is a site administrator or administrator, and whether the user is currently locked out of the system. Administrators have control over an entire cloud account, while site administrators only have control of a section of it. [See more about Sites here.](#)



Add, Delete or Edit User

Click the pencil icon to edit the user, and the trash icon to delete the user from the system.

Click the Add button located above the list to add a new user to the system.

You will be presented with a form to fill out, with required fields indicated by an asterisk. The user name can be a short name that the user will use to log into the system. Any of the info here, including the password, can be changed later using the edit button on the user list.

When you select a role for the user, a list of allowed functions for that role is displayed to the right of the selection box. The user will then have access to those application functions. See the [Roles section](#) for more information about Roles and Allowed Functions.



Role *	Allowed Functions
Technologist	Patient Admission, Save to Config, Record, Order

The user can be locked out temporarily by toggling the Locked Out toggle, and later allowed access again.

Be sure to click Save when finished adding a new user or editing an existing one.

User Groups

The User Groups page displays a searchable list of all user groups that have been created in the system.

Group Name	Monitoring Type	
Analysis		
Default		
Demo Group	Continuous	
Intermittent Group 1	Intermittent	

Create a Group

To create a new group, press the Add button. You must first enter a name for your group, select a monitoring type, and then populate the group with users. This is done by pressing the arrow to the left of the user's name on the list on the right. The user is then moved to the "Users in Group" list on the left. Using the search field is helpful to find users if your list is long. Be sure to save your changes.

New User Group

Group Name *

Monitoring Type

Users in Group Search

Full Name	User Name

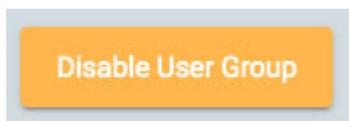
Users not in Group Search

Full Name	User Name
← Stefan Hernandez	StefanH
← Nicole Jenkins	NicJ
← Claire Johnston	Claire
← Andrea Blanchard	Blanchard
← Everett Moon	Moon
← Renée Mateo	Renée
← Yuan Wu	Yuan

Cancel Save

View/Edit a Group

To view or edit an existing group, press the View/Edit button (pencil icon) and you will open a page similar to the Add Group page, except the group will already be populated with users. You can edit the group name or the monitoring type, and you can also remove or add users. There is also a button to disable the user group.



Roles

All users in the system are assigned a Role, which gives them access to a set of allowed functions in the application, such as access to Patient Admission or Monitoring. This is different from permissions, which allows a level of access to individual patient visits.

Roles which have the Monitoring function enabled allows users assigned that role to see and use the Monitoring tab. The Report Templates function allows users to see that tab, and so on. Note that the Patient Admission function also allows access to the Upload tab.

Note: Not all functions have been activated in version 4.0 of the application.

Roles are created and defined on the Roles tab. To create a new role, click the Add button. Give the role a name and then toggle on the functions you want to allow. To edit a role, press the edit button (pencil icon) on the row of the role you want to edit. Roles defined here can then be assigned to users on the [Users](#) tab.

Edit Role

Role Name *
Default

Allowed Functions

Toggle on to allow access to the following functions:

- Patient Admission
- Support
- Save To Config
- Report Templates
- Monitoring
- Record
- Order

Authentication

On this tab, you can create or edit the password policy and authentication parameters.

Password parameters include such items as minimum number of characters or whether you want the password to expire after a given time.

When multi-factor authentication is enabled, users are emailed a code which they need to type in before login is complete.

Remember to press Save when making any changes on this page.

Exam Types

When creating a new exam, you must associate it to an exam type. Use this tab to create and edit exam types.

Click the pencil icon to edit an exam type.

Edit Exam Type

Exam Type Name* ICU

Monitoring Type Continuous

Description

Modality Name* Acquire Pro

Review Perspective Review

Acquisition Perspective Routine

Report Template

Disabled

Workflow States in Exam Type

Workflow State	Report Template
Initiated	
Scheduled	
Recording	
Recorded	
Uploaded	

Workflow State

Pruned

Drag a workflow state to the list in the left to add it to the Exam Type workflow.

Cancel Save

On the edit page you can change the name, description, monitoring type, modality, perspectives and the report template of the exam type.

Use the disable toggle if you want to temporarily disable the exam type. Then the exam type will not be available for selection when adding a new exam.

Add custom workflow states to the exam type by dragging them from the list on the right to the list on the left. Change a custom state's position on the list by dragging it to a new position. A custom state can be removed by pressing the right arrow. The predefined workflow states cannot be modified or removed. Custom workflow states can be created and modified on the [Workflow States](#) tab.

Report templates can be added to a workflow state by selecting one from the drop down list to the right of the workflow state.

Remember to click save when you are finished.

To create a new exam type, press the Add button. You can then edit it to add custom workflow states.

Monitoring Types

Use this tab to create and edit monitoring types. The monitoring type can then be selected as part of an exam type.

Click the pencil icon to edit a monitoring type on the list, or click Add to create a new monitoring type.

Edit Monitoring Type

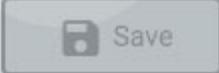
Name *
Continuous

Max Concurrent Exams *
4

Max Inspection Interval *
120

Monitoring *
Continuous

Notification Email

Choose a name for the monitoring type, the number of maximum concurrent exams, the maximum inspection interval in minutes, whether the monitoring is continuous or intermittent, and type in a notification email. Then click Save.

Report Templates

This page shows a list of all available report templates that can be selected when [generating reports](#), or when [associating a report template to a workflow state](#) in an exam type.

Associate User Groups

Click the View/Edit button (pencil icon) to view which user groups have access to the report template under the "Allowed User Groups" list.

The screenshot displays the 'Edit Report Template' interface. At the top, there is a 'Name' field containing 'Exam Info'. Below it is a 'File Path' field with a 'Browse' button. The interface is divided into two main sections: 'Allowed User Groups' and 'Denied User Groups', each with a search bar. The 'Allowed User Groups' list contains one entry, 'Default', with a right-pointing arrow. The 'Denied User Groups' list contains seven entries: 'Intermittent Group 1', 'Intermittent Group 2', 'Intermittent Group 3', 'Monitoring', 'User Group A', 'User Group B', and 'Routine EEG', each with a left-pointing arrow. At the bottom, there are 'Cancel' and 'Save' buttons.

To add a user group to this list, click the left arrow beside the user group name on the "Denied User Groups" list. To remove access, click the right arrow next to the group you want to remove.

Click Save to save your changes.

Add or Edit Report Templates

If you have Microsoft Word installed with the Stratus EEG Report tab add-on, then you can create or edit report templates.

To base your template on an existing template, first download the template using the download button, then open it in Word to make your edits. Then click the Add button, give your template a name, and upload the template using the Browse for file button.

Recorder IDs

This page shows a searchable list of Recorder IDs. Each recorder ID is associated to an actual acquisition device (computer name) connected to the Stratus EEG system and is also associated with a Default Exam Type and a Site.

Click the pencil icon to edit the Recorder ID name, or to associate it to another default exam type or site.

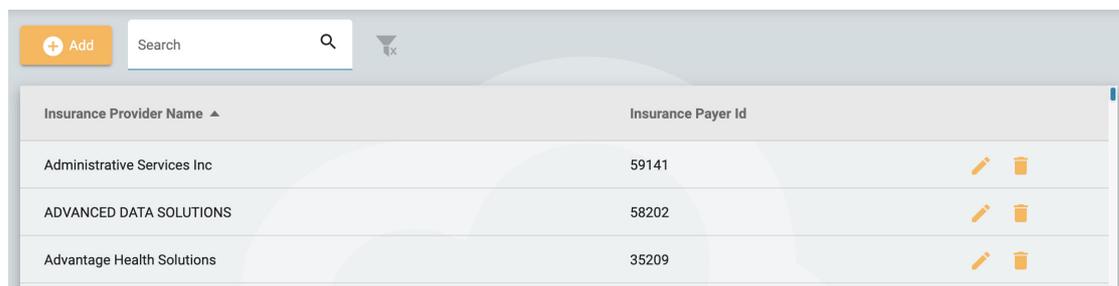
See also [Recorder ID](#) in the Definitions section.

Workflow States

To create a custom workflow state, simply press Add and give your workflow state a name. The workflow state will then be available to be added to an [Exam Type](#). Note that the predefined workflow states cannot be changed or removed.

Insurance Providers

This page shows a list of insurance providers that are available for selection on Patient Admission, Patient Referral, and the properties tab of the Patient Folder.



Insurance Provider Name ▲	Insurance Payer Id	
Administrative Services Inc	59141	 
ADVANCED DATA SOLUTIONS	58202	 
Advantage Health Solutions	35209	 

To add a provider, click the Add button. Type in the provider name and Insurance Payer Id, then click Save. To edit a provider, click the yellow pencil icon.

New Insurance Provider

Medication

This page shows a list of all active, obsolete and unconfirmed medications. Active medications will be available for selection in the patient folder. Obsolete medications will no longer show on that list. Unconfirmed medications are those that have been added to a patient's folder but are not yet shown on the active list.

The list can be filtered to show only active, unconfirmed or obsolete medication by selecting one of the filter options.

Medication	Status
Aptiom	Active
Briviact	Active
Depakote	Active
Dilantin	Obsolete

To add a new medication to the list, press the Add button, type in the name and press Save. You can also import a list of medications by pressing the Import button.

Add Medication

To edit a medication name, or change its status, click the yellow pencil icon.

Edit Medication

Sites Management

The Sites Management pages contains two tabs: Billing and Perspective Sync.

Billing

Download a billing report in PDF format by selecting your site, the month and the year you want the report to cover.

Perspective Sync

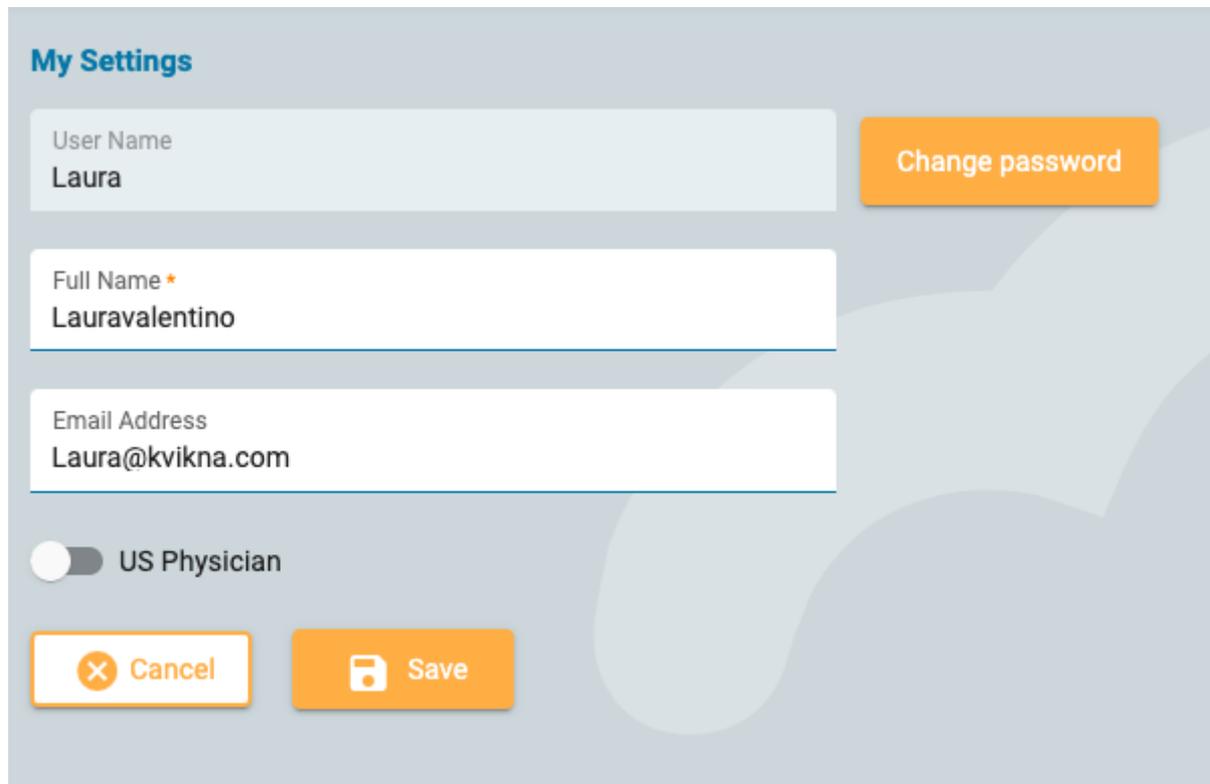
On this page, you can select perspectives that you want to "push sync" to Acquire systems in the selected site. Users of those systems will get a popup message prompting them to synchronize perspectives from the server.

Auditing

The Auditing page keeps a searchable log of actions in the system by users. You can filter the list by Site, User, Patient, Date, Category and Action. The list can be sorted by clicking the list headers, and clicking a 2nd time to reverse the sort. Click the green filter button to clear all filters.

My Settings

On this page you can change your email address or password.



My Settings

User Name
Laura

Change password

Full Name *
Lauravalentino

Email Address
Laura@kvikna.com

US Physician

Cancel Save

If you are a US Physician, click the US Physician toggle to reveal additional identity and contact info that must be filled in.

US Physician

NPI Number *

Street Address *

City *

State ▼ Zip Code *

Phone Number

Credentials ▼

Specialty ▼

To change your password, press the Change Password button, type in the old password, then a new one, then confirm by typing the new password a second time.

Change Password

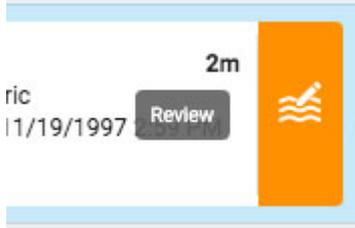
Old password *

New password *

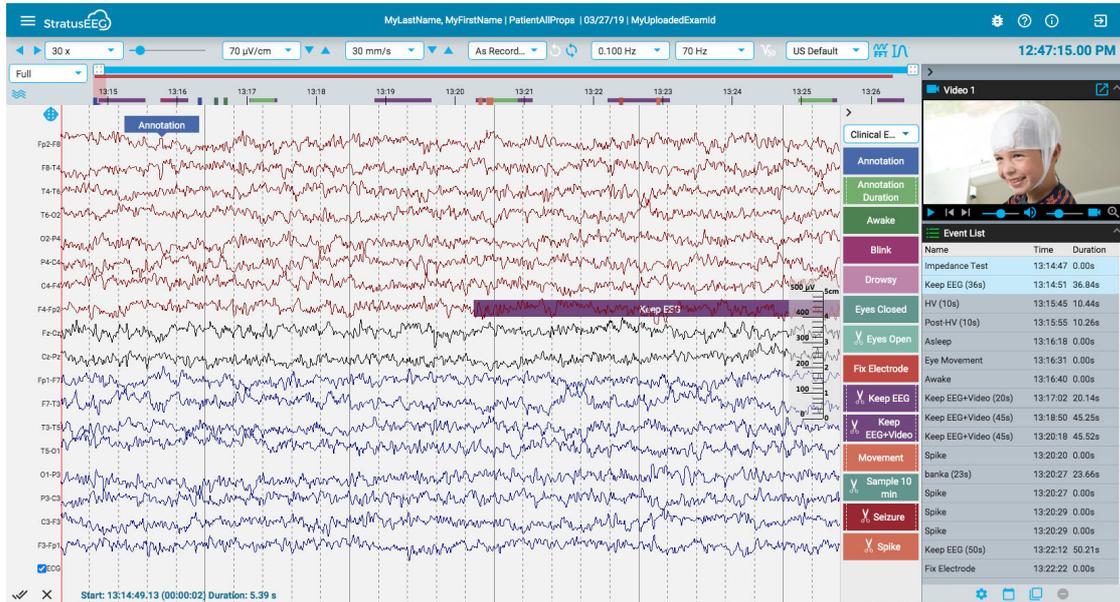
Confirm password *

Start Review

To open an exam for review, press the Review button on an exam card. Exam cards are found on the [patient visit list](#) and also on the [Patient Folder](#).

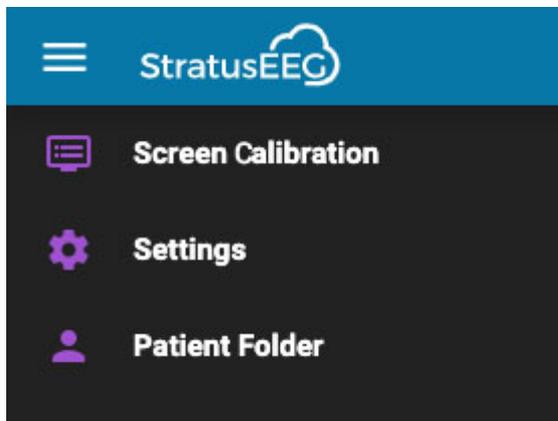


The exam opens in the review interface in a new browser tab.

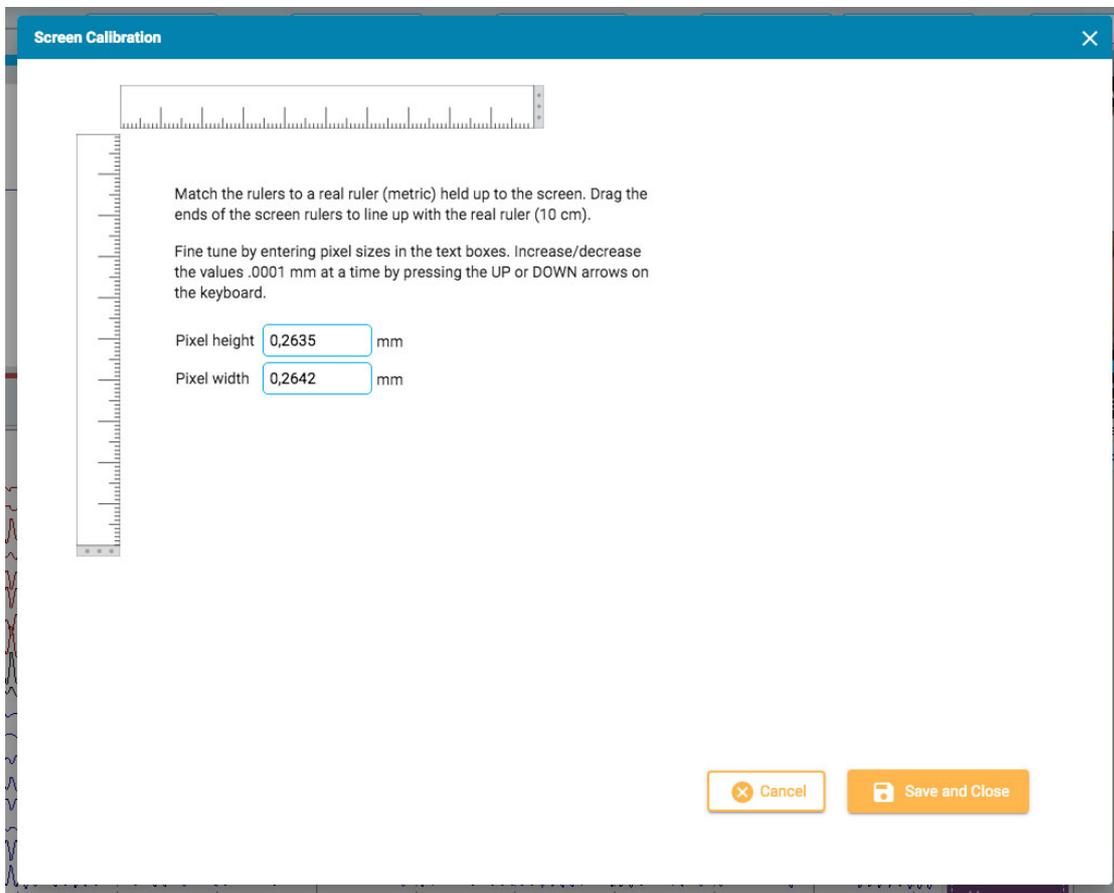


Screen Calibration

When you open an exam on a new monitor for the first time, the screen needs to be calibrated in order to accurately interpret the information. Choose the Screen Calibration option on the menu located at the top left of the screen. Click the "hamburger" icon (3 horizontal lines) to open the menu.



This will open the Screen Calibration popup:



Hold an actual metric ruler up to the screen. Then drag the ends of the screen rulers to line up with the real ruler. You can fine tune the measurement by entering pixel sizes into the text boxes on the right, or by pressing the UP and DOWN arrows on your keyboard. Then press Save and Close to save your changes. Calibrating your screen will also cause the [vertical ruler](#) to be correctly displayed on the right side of the channel chart.



WARNING: To ensure accuracy, before reviewing an exam for the first time on a new screen, or when adding a second screen, the screen must be calibrated

Toolbar

At the top of the screen, just below the blue header bar, is the toolbar. From left to right, it contains the following tools:



Paging Buttons: Click the paging buttons to start paging through the exam, forward or backward. The arrow buttons turn into pause buttons which you can click to stop paging. Clicking anywhere on the channel chart will also stop the paging.

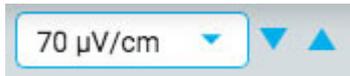
Use the scroll button on the mouse to manually page forward or backward.

Step forward or backward one page at a time by clicking once on the right or left of the screen.



Paging Speed: Change the paging speed by selecting another speed from the list, or by using the paging speed slider.

The value "30x" means 30 seconds of EEG per second. The default can be changed in the [Settings](#) popup.



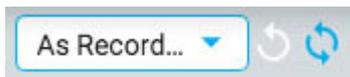
Sensitivity: Change the sensitivity of the trace display by selecting another value from the list, or by using the up/down arrows to bump the sensitivity up or down one step at a time. You can also use the up/down arrows on the keyboard for this purpose.

The plotted amplitude of the EEG is controlled by the sensitivity setting. This can be specified either in $\mu\text{V}/\text{mm}$ or $\mu\text{V}/\text{cm}$ in the [Settings](#) popup. For example, the sensitivity of $70 \mu\text{V}/\text{cm}$ means that $70 \mu\text{V}$ waveform will be plotted as one cm on a calibrated screen.

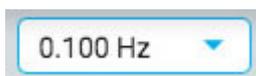


Timebase: Change the timebase of the display by selecting another value from the list, or by using the up/down arrows to bump the timebase up or down one step at a time. The default can be set to cm/s or mm/s in the [Settings](#) popup.

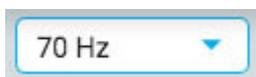
Note: The up/down arrows for sensitivity and timebase may be hidden on smaller screens.



Montage: Select another montage from the list. The first button to the right quickly reverts back to the "As Recorded" montage, and the next button recalls the last used montage.



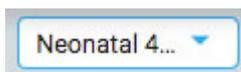
Low Cut Filter: Select the cut-off frequency in Hz from the list, or turn off the low cut filter. The cut-off frequency is the frequency where the amplitude is dampened by 50%.



High Cut Filter: Select the cut-off frequency in Hz from the list, or turn off the high cut filter. The cut-off frequency is the frequency where the amplitude is dampened by 50%.



Notch Filter: Toggle the notch filter on or off. The notch filter removes the 50/60 Hz interference from the signal.

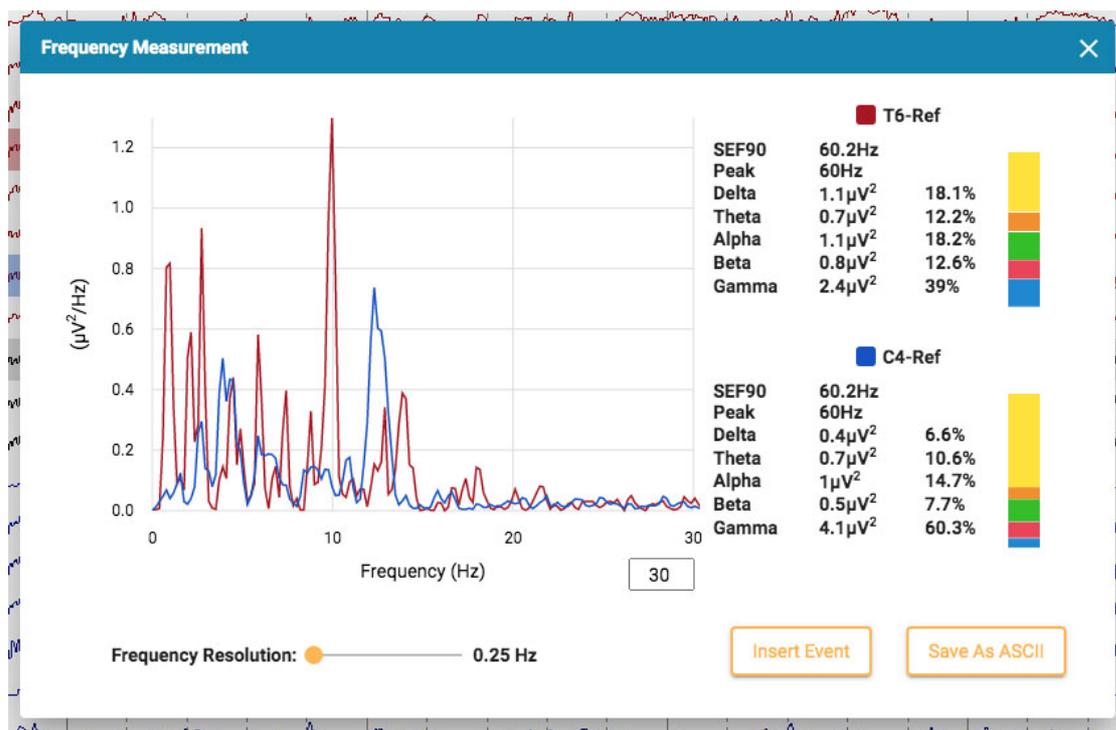


Perspectives: A perspective is a predefined combination of settings including montage, event palette, channel settings and more. Use this dropdown to quickly change the whole group of settings.



Frequency Measurement: This button activates the Frequency Measurement tool. Press the button once to activate the tool, then select a length of a trace by dragging to analyze. A popup window appears with the calculations as shown below.

You can select another channel (up to 4) while the popup window is still displayed. Subsequent channels will appear on the graph in different colors.



Press the Insert Event button to place a context event into the exam. Later, you can hover over the event to reveal the FFT button. Press this to show the popup with the calculations.

Press Save to ASCII to save the analysis as a text file.

About the Calculations

The power spectrum is calculated with Welch's method. Based on the selected frequency resolution, 0.25, 0.5 or 1 Hz, the EEG is divided into 4, 2 or 1 second blocks. A Hamming window function is applied to each block, periodogram calculated and results from all blocks averaged.

The power in the following frequency bands is calculated by summing the power in the frequency bins within the frequency bands:

- Delta: 0.5–4 Hz
- Theta: 4–8 Hz
- Alpha: 8–13 Hz
- Beta: 13–30 Hz
- Gamma: 30–100 Hz

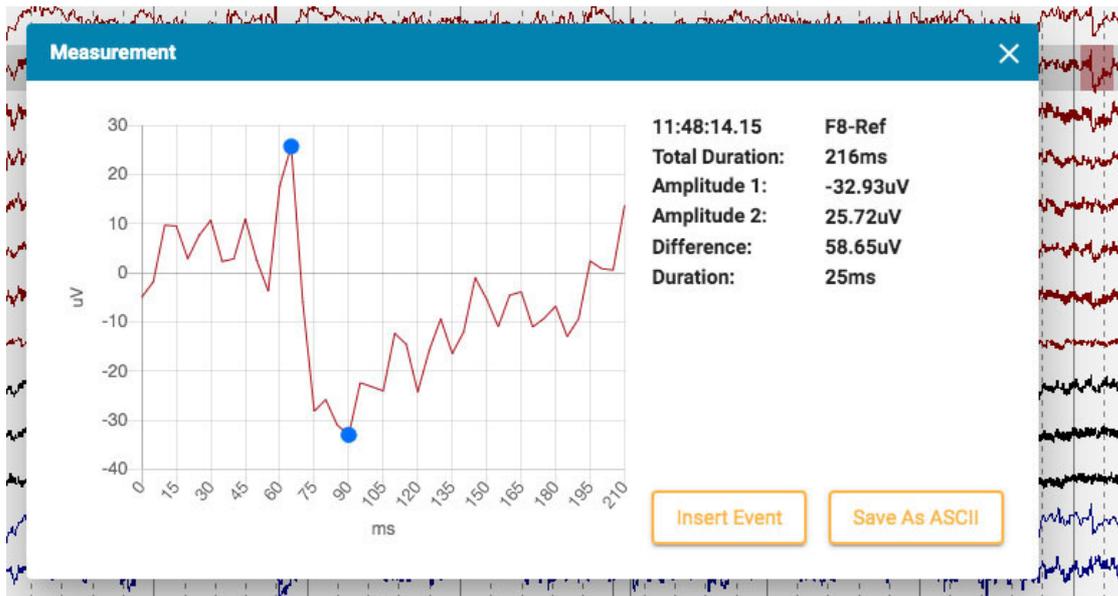


Waveform Measurement: The button shown above activates the Waveform Measurement Tool. This tool is used to measure the the difference between two

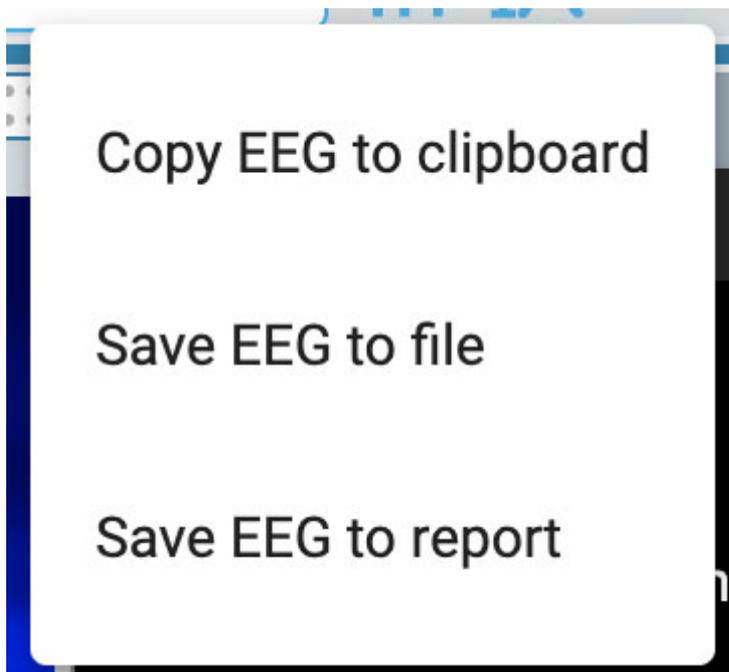
amplitudes of a selected waveform.

Press the button once to activate the tool, then select a small portion of a trace that you want to measure. A popup appears showing an enlargement of the waveform, plus start time, total duration, amplitudes 1 and 2 and the difference and duration between them. It is possible to adjust the placement of the two amplitudes by dragging the blue dots.

Two buttons allow you to save the information as an ascii file, and/or insert a context event into the exam. To close the measurement tool, either click the X on the popup window or press the toolbar button again to untoggle it.



EEG Clips: Press this button to take a screenshot of the current EEG. A popup menu appears allowing three options.



The first option copies the EEG to the clipboard. You can then paste the image into a document or email. The second option saves the EEG as an image file to your

computer. You will be able to choose the location of the file. The third option saves the EEG clip to the patient folder where it will be included when a report is generated. You will have the option to delete any clips before generating a report on the [EEG clips](#) page of the patient folder.



Posterior Dominant Rhythm: Press this button to add a PDR event marker into the EEG. Placing the event works like placing other [duration events](#) – click the spot where you want the event to begin, then click again where you want it to end. After placing the event a popup appears:

Posterior Dominant Rhythm [X]

Timestamp: 8/3/2011, 6:01:51 PM **Duration:** 5.47s

Frequency: Left Hz Right Hz Symmetry

Amplitude: Left µV Right µV Symmetry

Maximum Amplitude in the **region**

Reactive to eye opening: Undetermined Yes No

i The selected region might not contain a valid Posterior Dominant Rhythm

Update info in EEG Description?

⚠ Warning: Updating will overwrite any previously entered info

The timestamp, duration, frequency and amplitude are automatically filled in, but frequency and amplitude can be edited. Choose a brain region for maximum amplitude using the dropdown box, and make a selection for "Reactive to eye opening". The default is Undetermined.

If the selected region probably does not contain a valid Posterior Dominant Rhythm, a warning pops up.

Finally, if you want the info in the PDR event to appear in the EEG Description, choose Yes. This will overwrite any previously entered info. Otherwise, click No.



Prune Button: The Prune button becomes available when [Prune Events](#) have been placed. Press the prune button to trim the exam down to the areas that have been marked with prune events.



Undo Prune: After pruning, the prune button changes to Undo Prune. Press this to restore the exam back to its unpruned state.

13:14:47.13

Time Cursor: The time cursor is a **vertical red cursor** which moves across the screen when video is played, and it can also be dragged to a specific point. The time of the current position of the cursor is displayed on the right side of the toolbar.

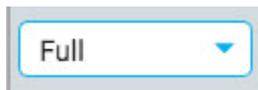
Timeline Overview

The Timeline Overview is located above the channel chart and provides a visual representation of the duration of the entire exam, or just a selected duration.



Duration

You can set the duration of the overview to show the full exam, or a part of it. This can be helpful with long recordings to be able to see the overview more clearly. This is done either by choosing the duration from the drop-down list, or by using the zoom bar (see below).



Zoom Bar

The Zoom Bar is another way to change the duration of the timeline. It is located at the top of the overview, just under the toolbar. Drag either the left or right end of the zoom bar to shorten it. The zoom bar then works a bit like a scrollbar. You can move the zoom bar to the right or left to show later or earlier parts of the timeline. When you have zoomed in using the zoom bar, the duration drop-down displays "custom".

Timeline

Tic marks on the timeline show evenly spaced intervals. The actual interval depends on the length of the exam. You can click anywhere on the timeline and the channel chart will display that page on the Review pane.

Current Page Marker

A red, translucent marker indicates where the currently displayed page is located on the timeline. You can drag the marker to any location on the timeline to display that page. The width of the marker increases if you zoom in on the timeline.



Event Overview

Events are indicated on the timeline as small rectangles in the color of the event marker. Duration events appear as horizontal bars for the length of the duration. Click on any event on the overview to go to the location of that event in the channel chart.



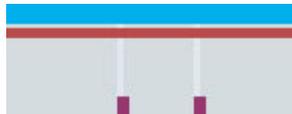
Video Overview

If video is present in the exam, a dark red bar appears in the overview just below the zoom bar. A second video appears in dark blue. A continuous bar indicates that video is present during the entire recording. Breaks in the bar indicate breaks in the video.



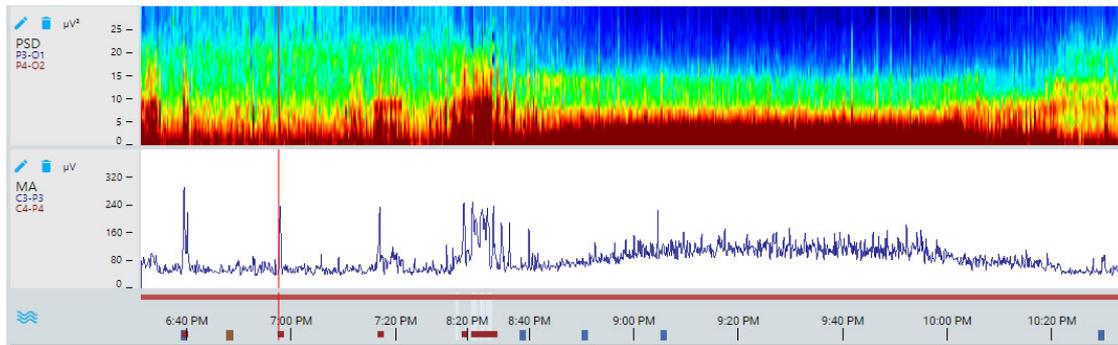
Segment Breaks

If there is a break in the recording, it is indicated by a white vertical line on the overview.



Trends

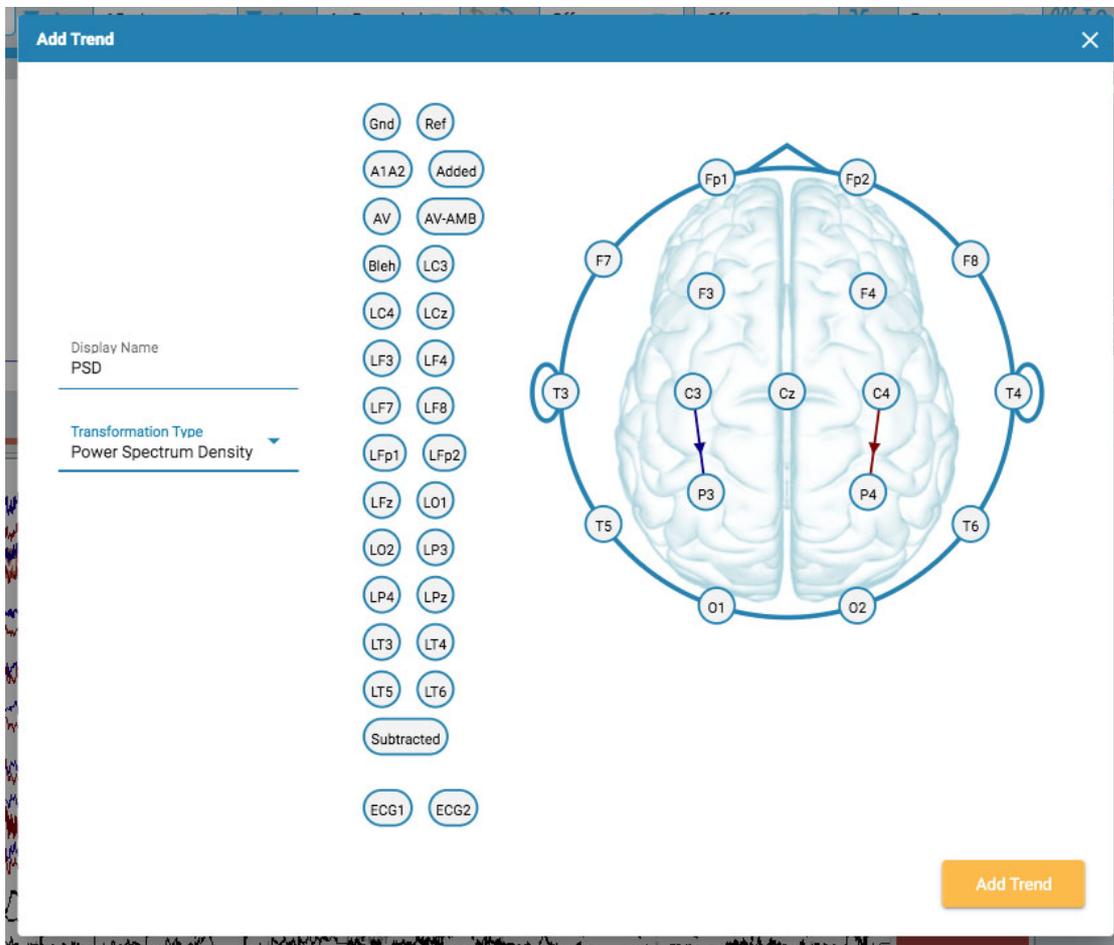
The Trend Overview offers an additional way to view the EEG data in an exam. Trends may already be added during the acquisition of the exam, but they can also be added or edited during review.



To add a new trend to the overview, press the Add Trend button located to the left of the overview:



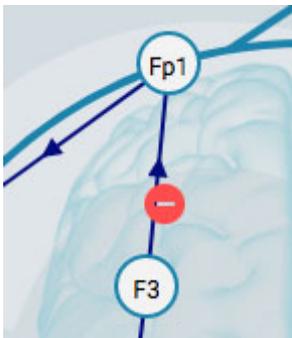
This opens the following dialog:



Select a transformation type from the dropdown list. Display Name shows the short name that will be displayed on the trend overview label.

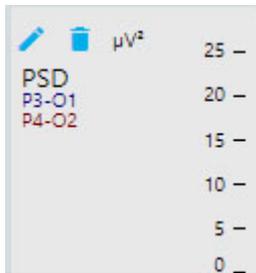
Select channels by clicking the electrode you want as the active channel, then on the one you want as reference. A line is drawn on the head between the two with an arrow indicating the direction. You can also use the electrodes shown to the left of the head. In this case, the arrow will not appear to connect the channels, but will be indicated by a horizontal pointing arrow on the active electrode.

If you want to delete a channel, hover over an arrow and the cursor changes to a remove icon. Click to remove the channel.

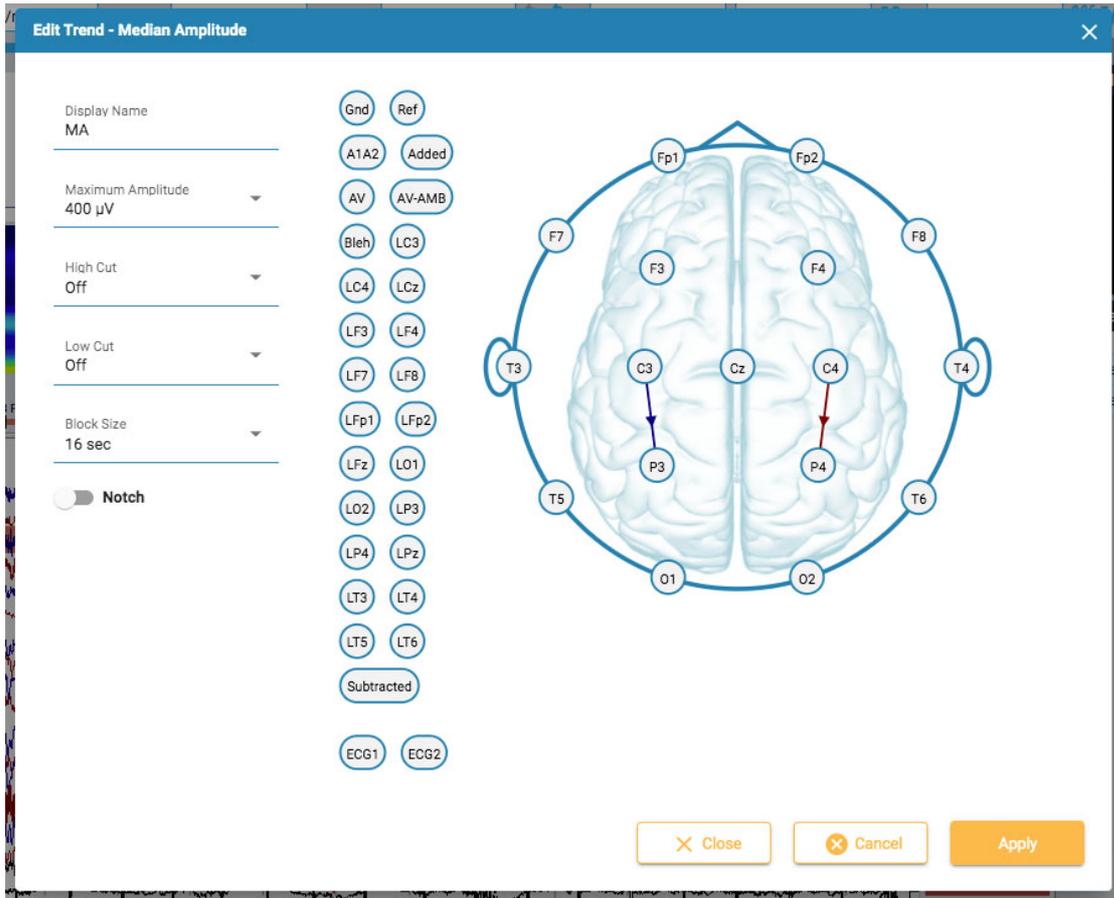


When you are finished, press Add Trend.

To edit a trend, press the Edit button (pencil icon) on the overview label.



The Edit Trend dialog appears:



The Edit Trend dialog works similarly to Add Trend with regards to adding/deleting channels. The difference here is that you can apply or change several parameters and filters. Press the Apply button to apply the changes.

To delete a trend, press the Delete button (trash can icon) on the overview label.

Note: Added and Edited trends are currently not saved to the perspective.

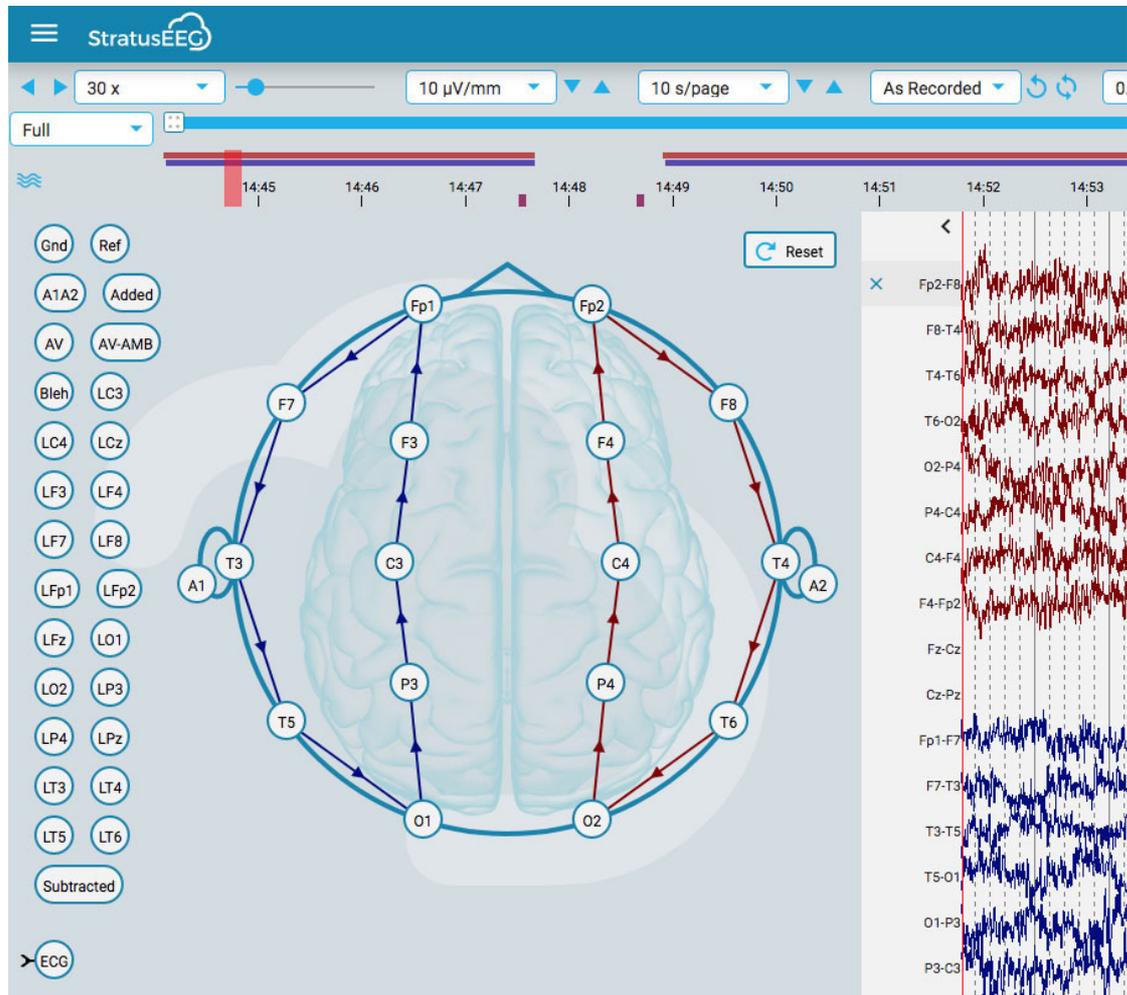
Channel Chart

The main area of the review window is the channel chart. To the left of the chart are the channel labels; to the right are the event markers which you can place on the chart.

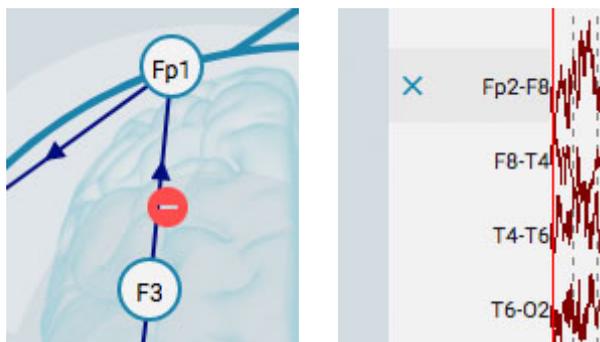
Edit Montage



A head icon above the channel labels opens the Edit Montage panel. The current montage is displayed on top of a head diagram.



Hover over a channel on the head and the icon changes to a remove icon. You can then click on the channel to remove it. Alternatively, hover over a channel label to reveal an X icon. Clicking the X will also remove the channel.



To create a new channel, click on one circle to make it the active electrode, then click on the second circle for the reference. You can also create channels using the reference electrodes to the left of the head.

You can change the position of the channels on the channel chart by holding the mouse button down on a channel label and dragging it up or down to a new position. Close the panel by clicking the close arrow (above the channel labels).

Press the Reset button to revert back to the original montage.

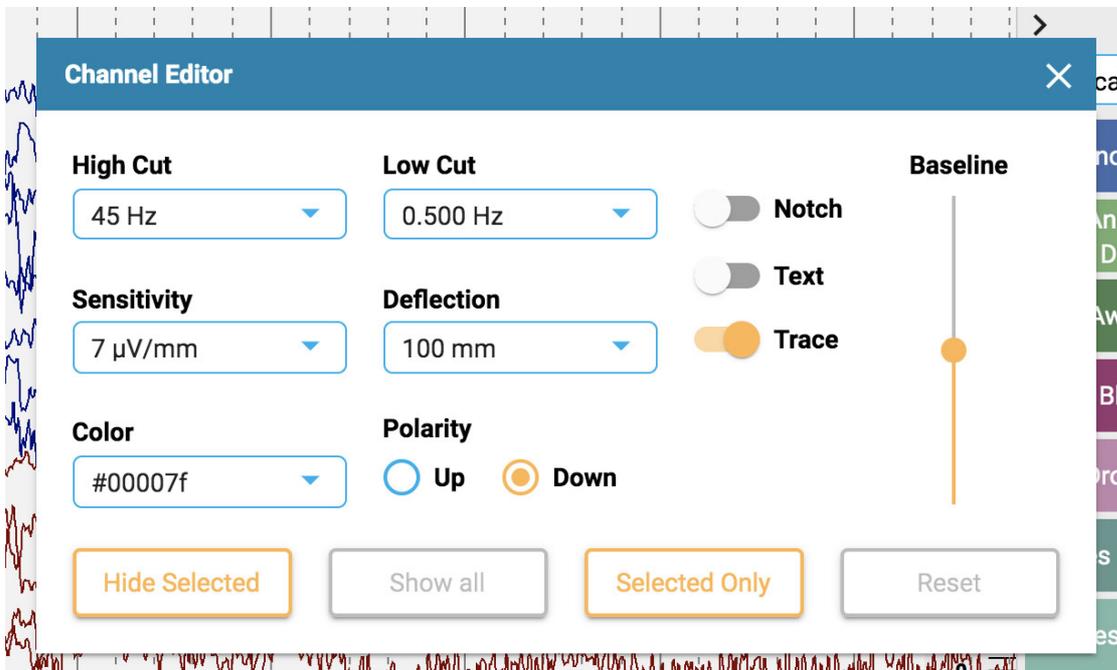


Channel Editor

Some channels, for example non-EEG channels, need to have special display settings applied to be able to view them properly alongside the rest of the channels. When special settings have been applied to a channel, a checkmark appears before the channel label, and the channel is no longer subject to the general changes made using the toolbar controls. Unchecking the checkmark removes the special settings for that channel.

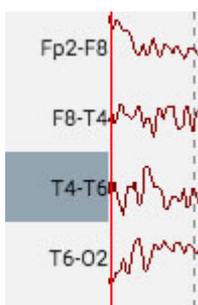


To open the Channel Editor, right-click on a channel label.



You can then change the filters, sensitivity, deflection, display type, color, polarity and baseline position for that channel by using the corresponding controls. You can also choose to hide selected channels or display only the selected channels. Click Reset to remove the special channel settings from the selected labels.

You can also change more than one channel at a time by single-clicking channels to select them, then right-clicking on one of them to open the Channel Editor. Selected channels appear with a shaded rectangle around the label:



At the bottom of the label bar are a double checkmark and X icon for selecting or deselecting all channels.

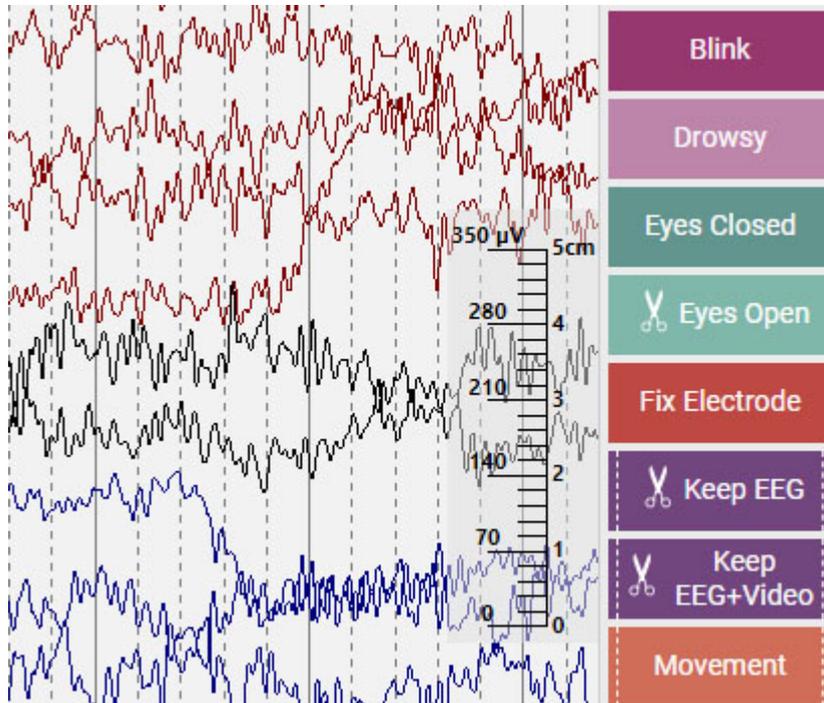


Ruler

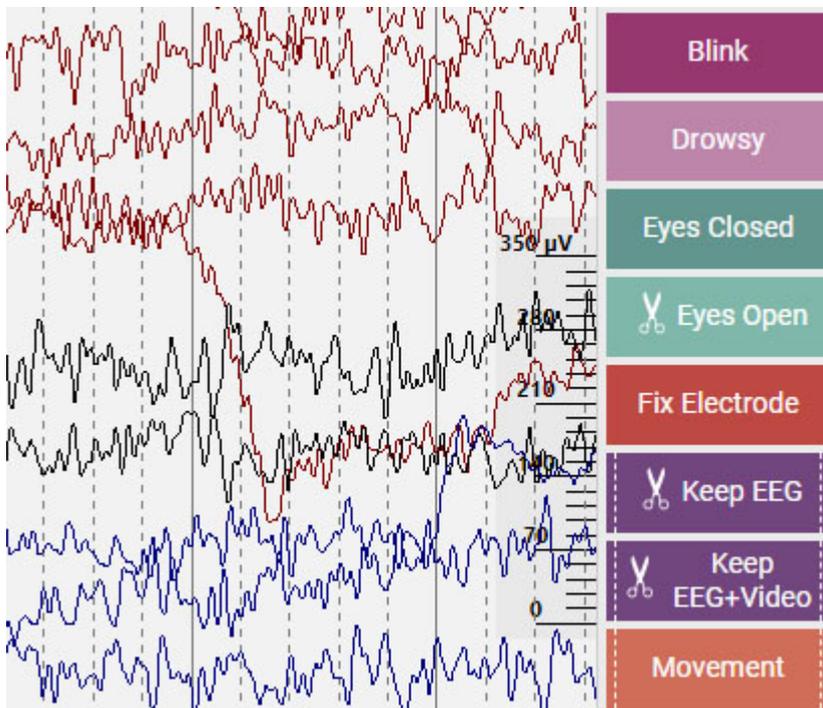
A transparent vertical ruler appears on the right side of the channel chart. This is to give a visual indication of amplitude. The screen needs to be calibrated each time an exam is opened on a new monitor for the ruler to show an accurate display of 5 centimeters. See the [Screen Calibration section](#) for information on how this is done. Once this is done, the position of the ruler changes to accurately reflect the amplitude of the EEG.

Note: If your ruler does not appear to show an accurate 5cm, that is a hint that you need to calibrate your screen.

Ruler before screen calibration:

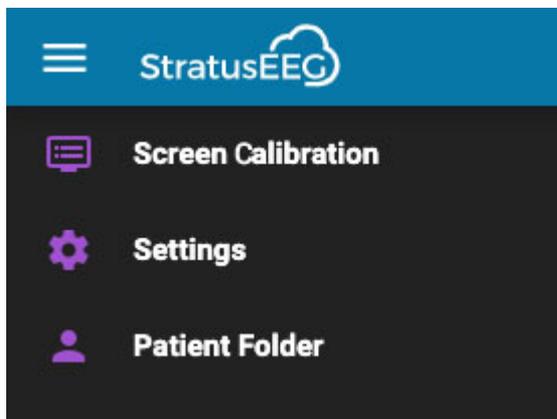


Ruler after screen calibration:

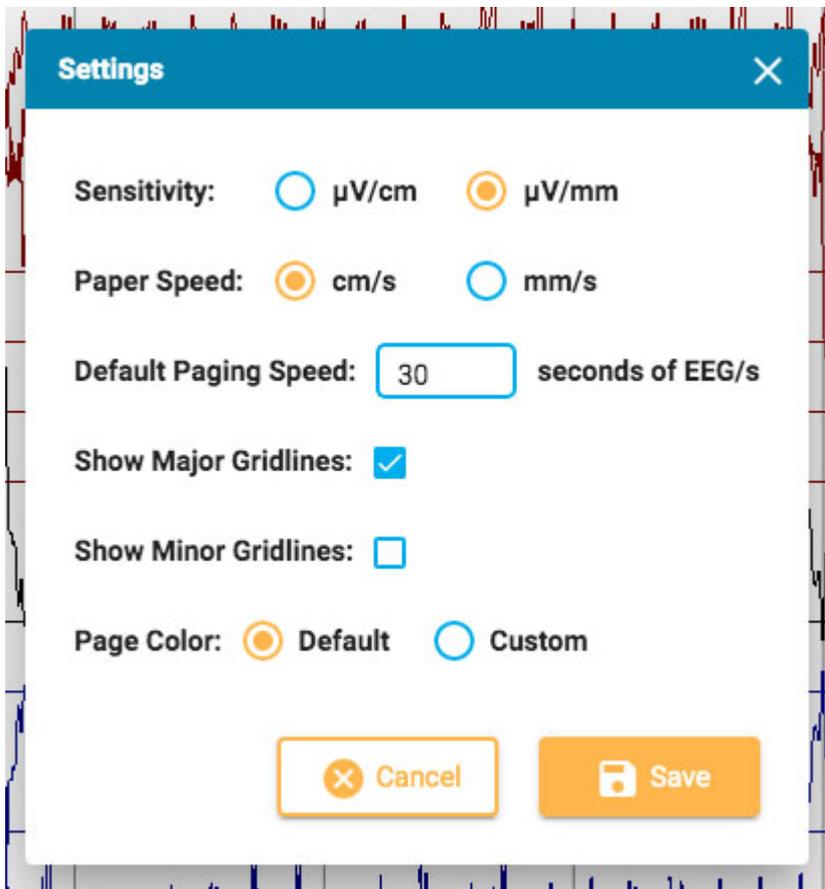


Settings

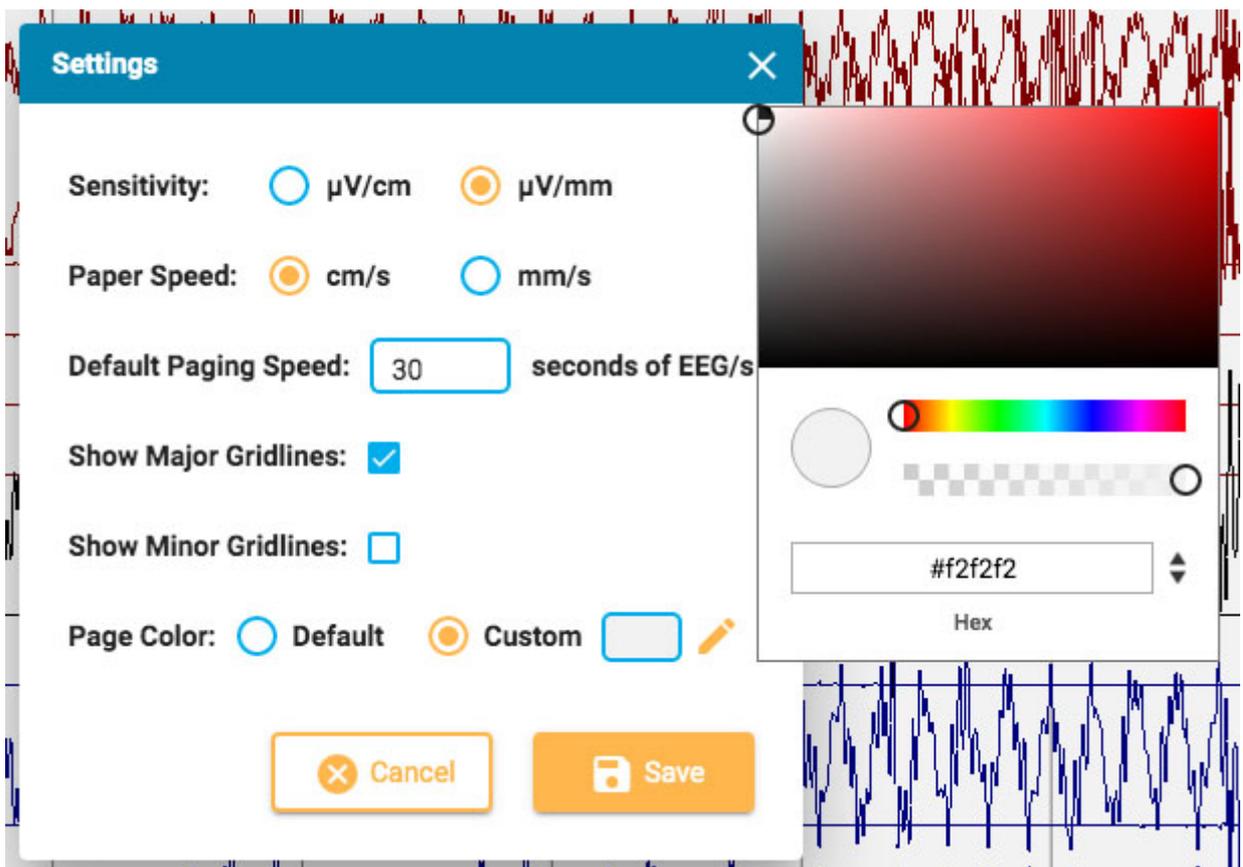
Choose Settings on the menu to open the settings popup.



The settings tool can be used to change several chart parameters.



Here you can set the default units for sensitivity and paper speed, and change the default paging speed. You can show or hide the major and minor gridlines and even change the channel chart background color. Press Custom to open the color picker. The default option reverts the color back to the light gray.



Events

The Event Palette contains a customizable set of event markers that can be placed either directly onto a channel, or at the top of the Channel Chart at the time of the event.



Use the drop-down list to quickly switch between different palette sets. You can hide/show the event palette using the arrow at the top of the palette.

Placing Events

To place an event, click the event on the event palette (it will become highlighted with a yellow outline), and then click on the channel chart where you want the event marker to appear. A vertical positioning line appears to help you with the positioning.

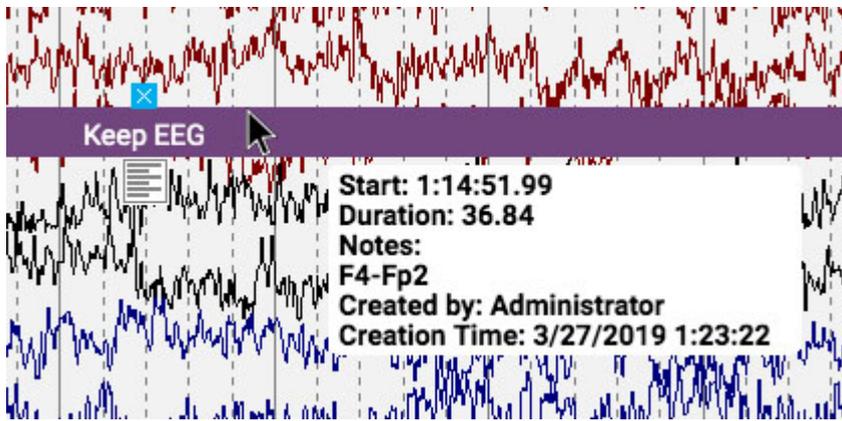
Alternatively, you can simply drag and drop any event on the screen.

Note: if the montage is changed such that the channel where the event was placed no longer appears, the event marker will be displayed at the point where the active electrode appears again, or at the top of the channel chart in the case that the active electrode does not appear.

Place Multiple Events

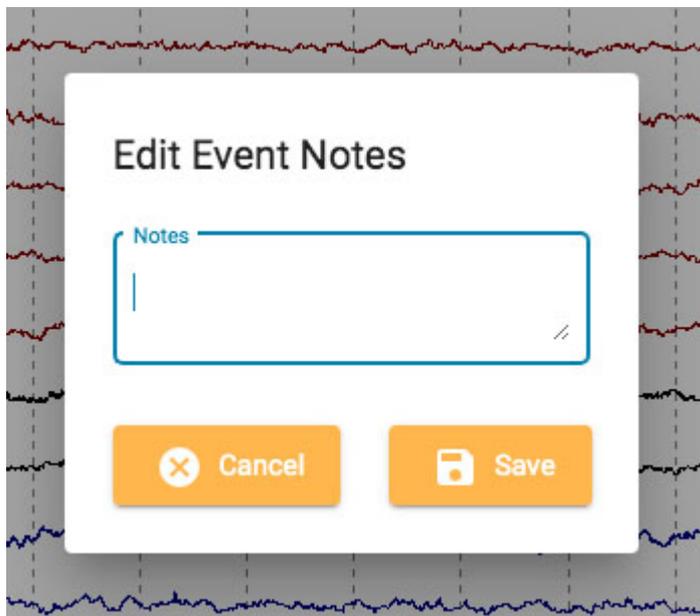
To place multiple instances of the same event, double-click the event marker first, and then you can insert an event marker onto the channel chart with each subsequent click, without having to go back to the event palette. Right-click on the channel chart to stop this action.

Once the event is placed, it will appear behind the traces. If you hover over the event, it comes to the foreground to make it easier to read the label. A close box appears above the event if you want to delete the event.



Add Notes to Event

While hovering over the placed event, click the notes icon which appears below. you can then add notes to the event.



Event Shortcut Keys

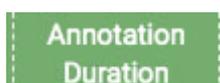
Instead of clicking on the event markers, you can also use the F-keys F1-F10, which correspond to the first 10 event markers on the event palette. Press the F-key then click the channel chart to place the event.

Place Event at Video Marker

During video playback, simply click an event or its shortcut key to automatically place the event at the point of the video marker. The event marker appears at the top of the channel chart.

Duration Events

Duration Events are events that happen over a period of time. These event markers can be recognized as they are marked with a vertical dotted line at each end.



Place the duration event, then click the arrow at either end to extend the duration. Click again to set the new duration. If you need to page forward or back while extending the duration, use the right or left arrow keys on the keyboard.

Prune Events

Prune events are used to mark areas of the channel chart that you want to keep after pruning the exam. You can recognize prune events by the scissors icon.



Note that events can be both duration and prune events.

Page by Page Pruning

You can quickly add prune events while paging by pressing the Alt+Page Down key (Option+Page Down on Mac). This will place an event across the entire page that you want to keep.

Pruning the Exam

After you have placed prune events, the Prune button becomes available on the toolbar.



Press the prune button to trim the exam down to the areas that have been marked with prune events. After pruning, the prune button changes to Undo Prune. Press this to restore the exam back to its unpruned state.

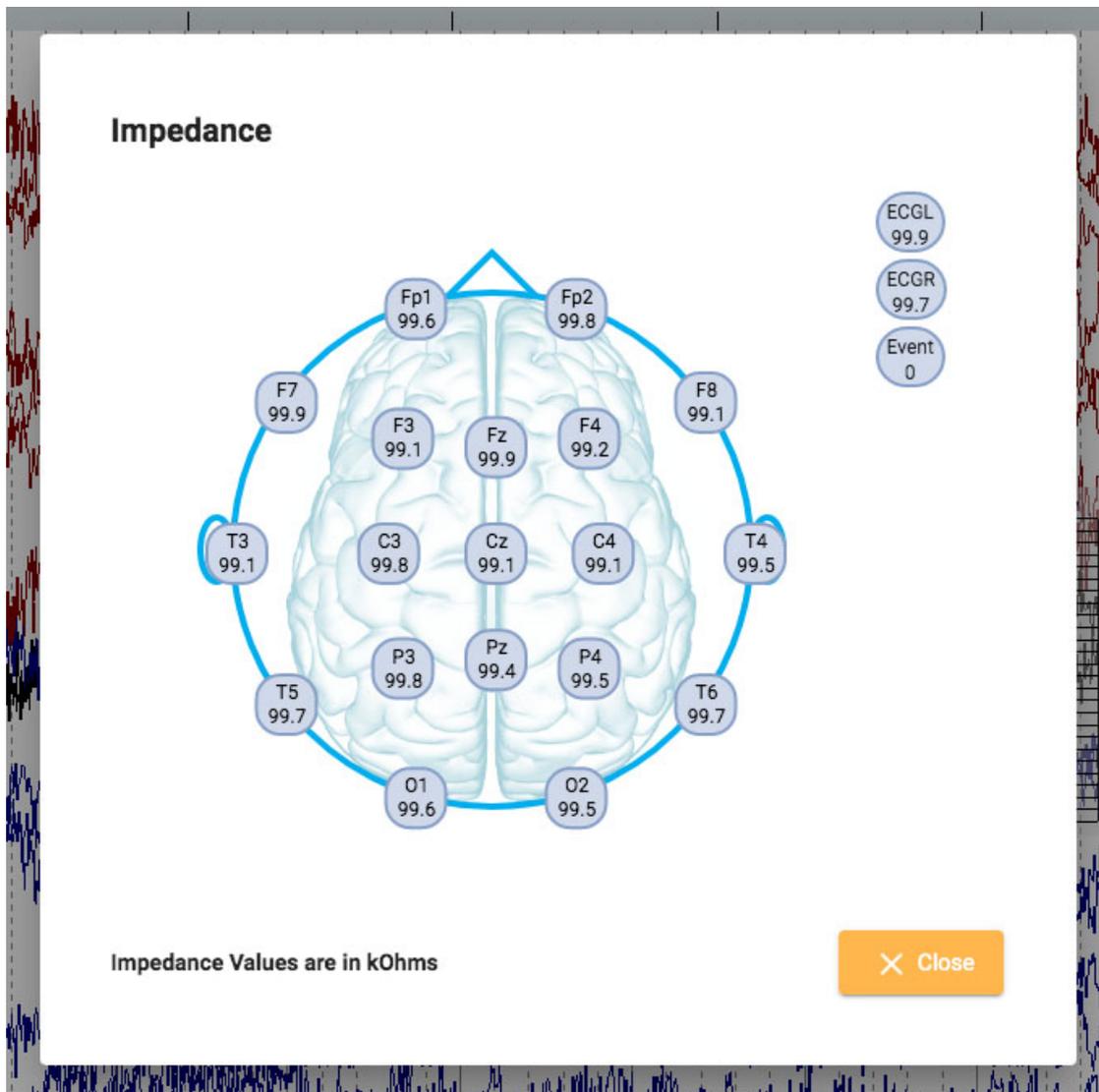


Impedance Events

Hover over an impedance event to show the impedance button (omega symbol).



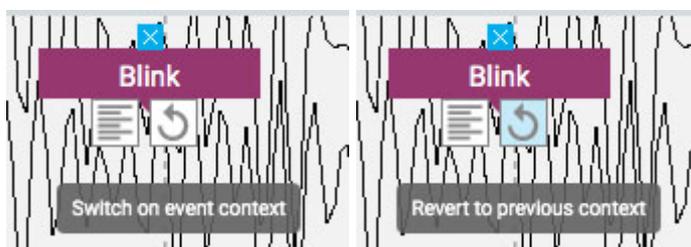
Press this button to display the impedance popup:



Impedance values are displayed in kOhms on a head diagram.

Context Events

Context events store information about the channel chart settings at the time of placement. Hover over the event to show the context button. Press the button to switch on context settings. When context is on, the button will be highlighted blue. Press again to switch context settings off.



Panel

The panel is located to the right of the channel chart and contains additional tools for navigating and analysing the exam. You can hide/show the panel using the small arrow button located at the top of the panel.



Video

If video is included in the exam data, it is displayed in the panel and can be played in synchronization with the exam data.

Video Toolbar

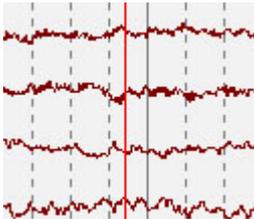


Play

Click the play button to start video playback. The play button changes to a pause button while the video is playing, so you can press again to pause the video.

Time Cursor

A red, vertical time cursor moves across the channel chart to show the position of the video in the EEG data. The channel chart pages automatically at the rate of video playback. You can also drag the time cursor to a point in the EEG to start the video at that point. [The time of the current position of the cursor is displayed on the right side of the toolbar.](#)



Step Buttons

Next to the play button are buttons to step forward or backward in small increments.

Volume Control

Use the volume slider to adjust the volume. Click the speaker icon to mute the sound completely.

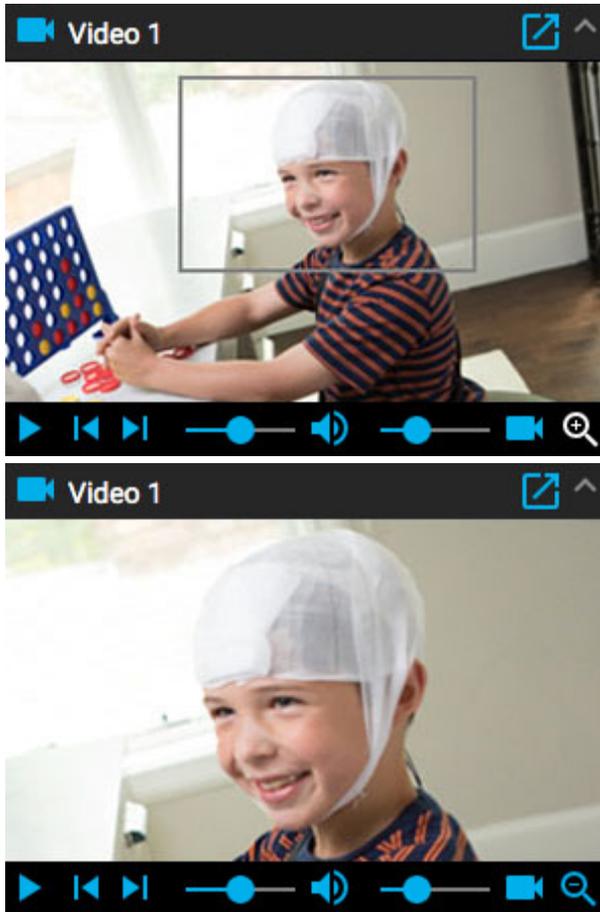
Video Speed Control

The video speed slider controls the video playback speed. Adjust this if you want to speed up or slow down the playback.

Zoom

You can zoom into the video by clicking the zoom button, then dragging an area of the video. The zoom button then changes to a zoom out button. Press the button to zoom

out. A shortcut method to zoom in and out is to ignore the zoom button: simply drag an area to zoom in, then right-click to zoom out!



Open in New Window

A small button at the top of the video panel pops out the video into a new window that can be resized or moved to another screen.



Event List

The Event List shows a list of all placed events in the exam, with the time it was placed and duration, if applicable. The list can be sorted by clicking the headers at the top of the list. Click a second time to reverse the sort.

Select an event on the list to find it on the channel chart.

The event list can be popped out and moved to another window by clicking this button at the top right:



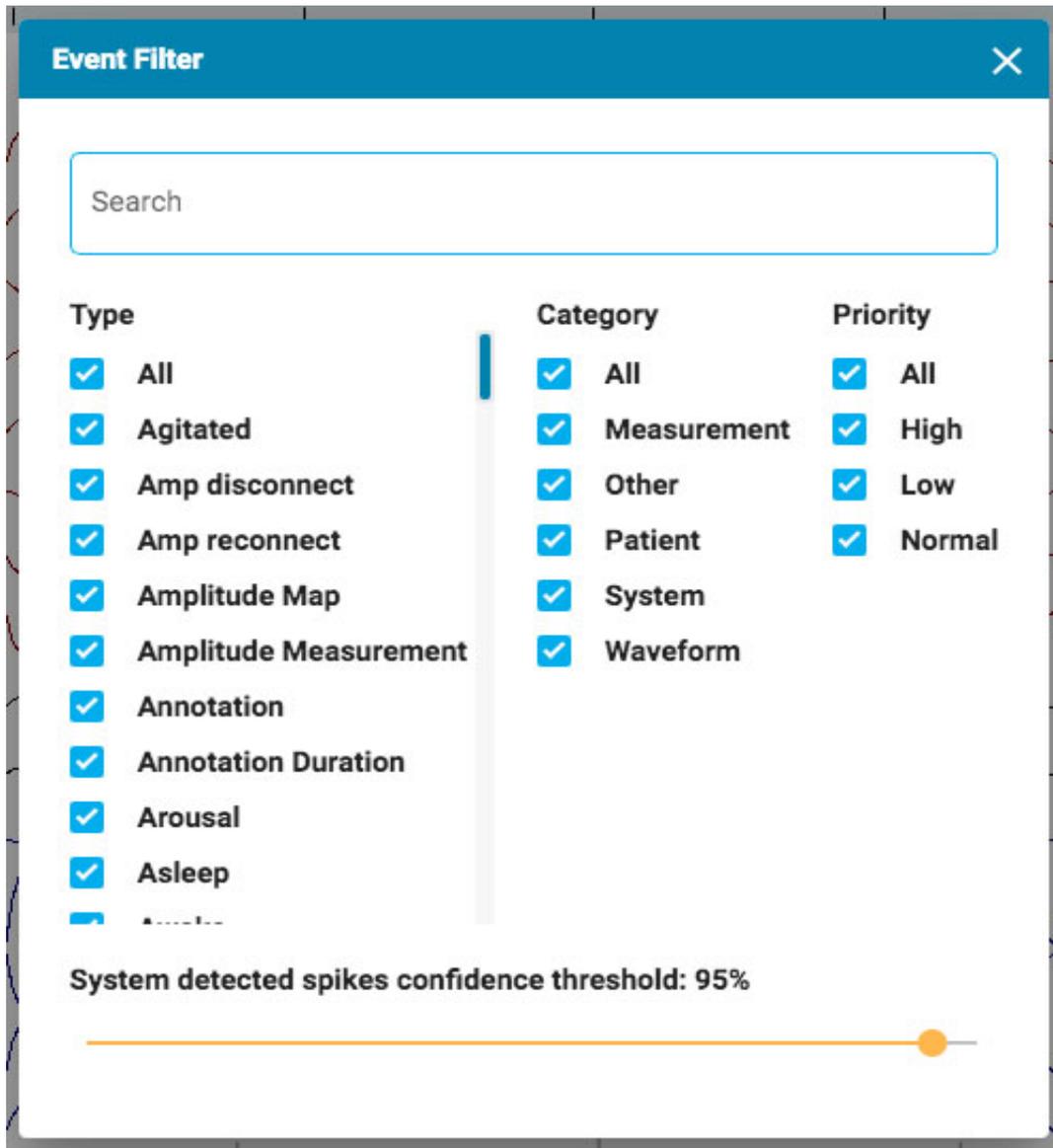
The buttons at the bottom of the event list perform the functions described below.



Edit Event Filter

This button opens a popup where you can apply filters to show only selected events. Uncheck any events you don't want to appear on the event list, trace display or overview.

You can also adjust the confidence threshold of system-detected spikes by using the slider.



Show Date

Show the date, as well as the time of the event.

Copy to Clipboard

Copy all events in the list to the clipboard. You can then paste the list into a document, such as a Word document.

Delete

Delete selected events from the exam. Select multiple events using the Ctrl or shift keys (cmd or shift on a Mac).

Patient Folder

An abbreviated version of the Patient Folder showing only the current exam can be opened in a new tab. This can be a handy way to fill in the Impression while the exam is still open. If you have 2 monitors, you can drag the patient folder to one screen while the exam is open in another.

In addition to filling in the impression, you can also view and edit information about the patient and study just as on the main patient folder. Anything entered or edited from this abbreviated view of the patient folder will be recorded into the main patient folder and be available when generating reports. See the [Properties Tab](#) section of the patient folder section for more information about viewing and editing this information.

To access the patient folder in Review, click the "hamburger" menu (3 white lines at top left) and choose Patient Folder.

