



Stratus EEG Web User Manual

Stratus EEG Analysis Web Application

Version 5.1

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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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Contents

Intro

- Device Description
- Disclaimers and Warranties
- Compliance
- Safety and Warnings
- System Requirements
- Acceptance Test
- Symbols Glossary
- Compatible File Formats
- Accompanying Documentation
- This Manual

Definitions

- Header Bar
- Patient Visits
- Patient Folder
 - Description
 - Actions
 - Properties Tab
 - Documents Tab
 - Permissions Tab

Status Tracker

- Patient Referral
- Patient Admission
- Upload
- Tasks
- Monitoring
- User Management
 - Users
 - User Groups
 - Roles
 - Authentication

Exam Settings

- Exam Types
- Monitoring Types
- Report Templates
- Recorder IDs
- Tags Manager
- Workflow States
- Insurance Providers
- Medication

- Sites Management
- Auditing
- My Tags
- EEG Settings
 - About
 - Perspectives
 - Events
 - Event Palettes
 - Montages
 - Trend Templates
 - Exam Type Preferences
- My Settings
- Review
 - Start Review
 - Screen Calibration
 - Toolbar
 - Timeline Overview
 - Channel Chart
 - Events
 - Panel
 - Review Menu

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 or tampering of software or data, including modification of one's own 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:

Medical Device Regulation (MDR 2017/745)

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.
IEC 62304:2006/Amd1:2015	Medical device software – Software life cycle 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 and performance of the Stratus EEG software and services 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 modifications to the device are forbidden. Doing so may result in loss, damage or injury, and will void the warranty.

WARNING: Care must be taken when making modifications to one's own data within the device and also when using supporting software with the device. Loss, damage or injury may occur and will void the warranty.

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 and 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.

Software Integrity and Cybersecurity

To maintain integrity and protection in relation to cybersecurity, the following are recommended:

- Do not install any other software not required for standard operation of the Stratus EEG application.
- Implement industry and local guidelines in relation to computer system hardening.

WARNING: Failure to follow these recommendations may lead to exposure of sensitive patient data.

Backups

The Stratus EEG software does not provide any integrated data backup mechanism, therefore an automated and daily off-site backup of all data must be implemented using an industry-standard third-party tool.

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. Failure to heed this warning can be a risk to health and safety.

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.

Decommission and Disposal

For information on how to dispose of the device at the end of its useful life, please refer to the 3rd party manuals of any hardware components concerning their proper disposal in accordance with the guidelines of your local authorities. This includes, where appropriate, safeguarding personal and health-related data in connection with security and privacy.

In a situation where decommission of data and software are required, software disposal requires formatting of disks that hold data in accordance with local authorities and IT industry standards as applicable.

WARNING: Failure to correctly format the hard drive may lead to exposure to sensitive patient data.

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 110.0.5481.178 or higher) (64-bit)
- Microsoft Edge (Version 110.0.1587.50 or higher) (64-bit)

Hardware Requirements

	Minimum	Recommended
Processor	2.0 GHZ	Quad Core - 2 GHZ
Memory	8 GB	16 GB
Screen Resolution	1920 x 1080	1920 x 1080
Graphic Card	-	Graphics processing units (GPU)



WARNING: Failure to meet the minimum system requirements may lead to a delayed diagnosis for the patient.

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.

	Minimum (Mbps)	Recommended (Mbps)
Bandwidth - Upload	5	20
Bandwidth - Download	20	100
Accessible Firewall Ports	HTTPS/443	

Note: The minimum bandwidth requirement may result in slower performance, especially with exams including video.



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 the Stratus EEG web application.
- 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)

Symbols Defined in IEC 60601-1



General Warning Symbol.

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 Stratus EEG Acquire and Stratus EEG Team Monitor systems, see the **Stratus EEG User Manual** that accompanies those systems.

This Manual

Form 3002 Revision 2

This manual covers all features of the web-based Stratus EEG application. Note that your version of the application may not include all features detailed here.

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.

Header Bar

Along the top of the Stratus EEG screen is a blue bar with several buttons. This section describes their functions.

Hamburger Icon

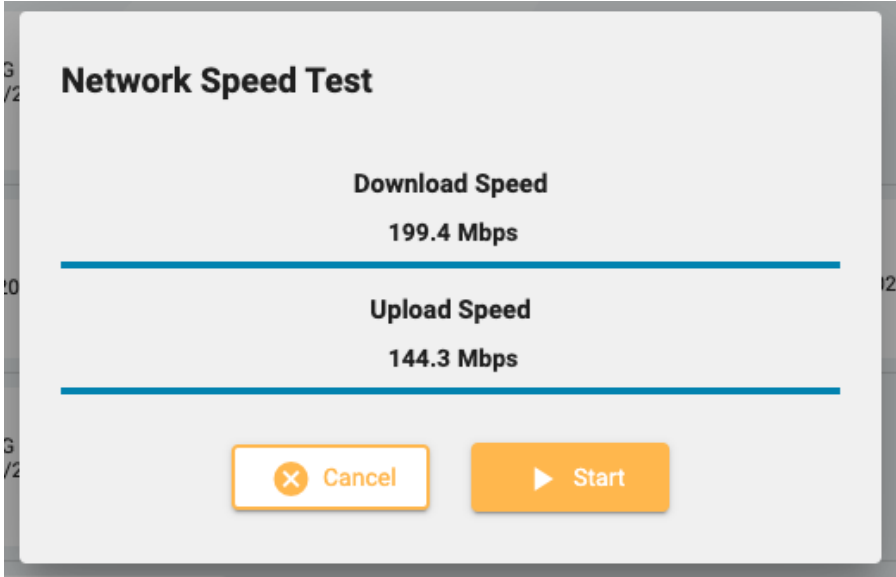


On the left is the hamburger icon. This button collapses the main menu to show only icons. This can be useful to create more space on smaller screens. Press again to restore the full menu.

Speed Test



This button opens the Network Speed Test tool. This can be helpful to diagnose problems by measuring the network speed between the client and the server. This differs from publicly provided internet speed tests in the way that it tests both the client and the server speed.



Debug



Pressing this button copies debug info to the clipboard. It can then be pasted to a document or email.

User Manual



Press this button to open this manual in a new tab.

About Box



Press this button to display the device label, with more information about the device and instructions for use.

Language Selector



Select the language in which to display the device label (About Box) and the user manual (if available).

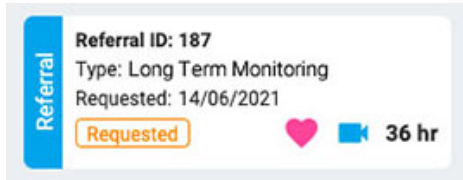
Log Out



Press the final button on the header bar to log out of Stratus EEG. The currently logged in user is displayed to the left of this button.

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 or patient referral. Referral cards are distinguished by a blue tab on the left of the card containing the word "Referral", as shown below.

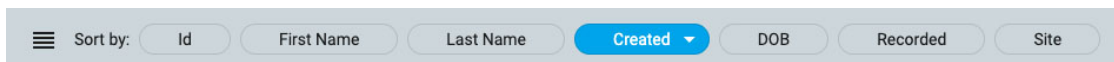


An arrow to the right of the exam cards indicates that more exams exist in the visit. Press this arrow to view additional exams.

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.



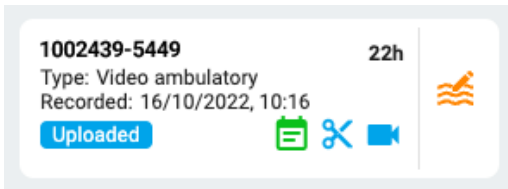
Hide/Show Filter

Toggle the small arrow button to hide or show a row of filters.



Exam and Referral Cards

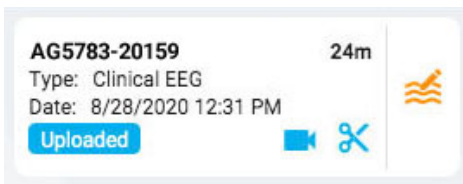
Each exam card displays some basic information about the exam: ID, type, start date and time, and length of exam if it has been recorded. Icons at the bottom indicate whether the exam includes video or has been pruned. If there is a task currently running on the exam, a green task icon appears (the same icon as on the Tasks item on the main menu) 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

The patient folder contains exams and related info in the patient's current visit, as well as previous visits. It is the patient management and reporting center of the system.

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.

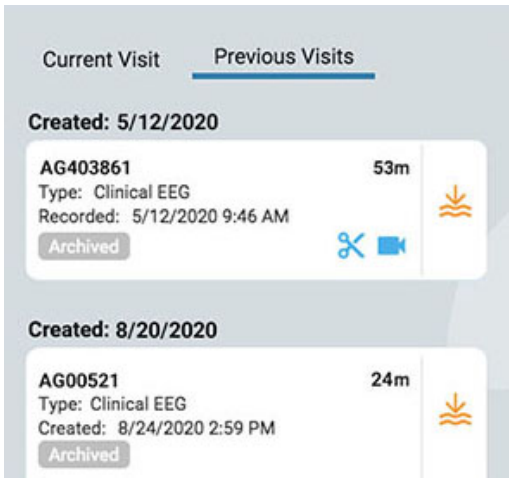
Exam/Referral Cards

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.

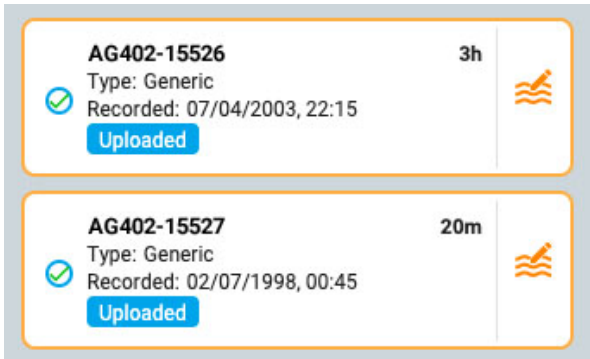
Previous Visits

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 details 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.

The screenshot shows the 'Exam Actions' menu for a patient's exam card. The patient ID is AG402-15526. The menu is open, showing the 'Exam Actions' dropdown. The 'Exam Details' section is visible, showing the following information:

- Assigned To: Gillian Chesnut
- Exam ID: Issue 17349
- Exam Type: External
- State: Uploaded
- Created Date: 03/11/2022, 11:22
- Recorded Date:
- Recorder ID: Not Set
- Duration: 71h
- Original Duration: 71h
- Recorded By:
- Ordering Provider:
- Reviewing Physician:
- Secretary:
- Pruned by:
- Size: 5 GB
- Patient State:
- Hours Since Last Meal:
- Referring Physician:
- Consciousness: Undetermined
- Tags: Global 2, epilepsy
- Recording stop time: 03/10/2022, 10:54

At the bottom of the menu, there are two buttons: 'Exam History' and 'Exam Folder'.

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 New Exam button and Exam Actions menu appear on the header to the right of the exam ID.



Click New Exam to initiate a new exam in the patient folder. A popup appears where you can enter an Exam ID and select an Exam Type. A new exam card is added to the patient folder.

The screenshot shows the 'New Exam' popup form. It has the following fields and buttons:

- Exam ID ***: A text input field.
- Exam Type ***: A dropdown menu.
- Cancel**: A button with a red 'X' icon.
- Add**: A button with a plus sign icon.

At the bottom of the popup, the text 'Hours Since Last Meal:' is partially visible.

Use the options on Exam Actions menu to perform actions on the selected exam(s). A description of the options follows.

Exam Actions



Preview Report: Select this option to preview a report and save it to the documents folder. A popup appears where you can select the report template (or use the default) and change the document name if desired. Press the Preview button and a preview of the report opens in a new tab. You can drag this tab to a 2nd monitor if you have one. You can continue to make edits in the patient folder and then press Refresh at the bottom of the preview window to see the changes. Be sure to click Save to save the report to the Documents tab without signing, or press Sign to save and publish the report. It is also possible to sign later on the Documents tab. Use the Download button to download the report in PDF, Word or plain text format.



Preview report buttons from left to right: Refresh, Download, Sign and Save.



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, save the exam as a "Stratus to Go", or transfer the file to another Stratus server. A popup appears where you will be asked to select one of the above options, 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.

If you are transferring the exam to another server, you will be asked to enter the server address, and your login and password. Then press Connect. When connected, a green checkmark appears with the word Connected. Then press Export.

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

Follow the export/transfer progress on the Tasks page. Exported exams can be downloaded from this page when the export process is complete.



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.



WARNING: When performing spike and seizure detection, be sure to consult the underlying EEG data. Solely depending on the software detection can give non-optimal results.



WARNING: The Persyst User Manual must be read before using the Spike and Seizure Detection feature.



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

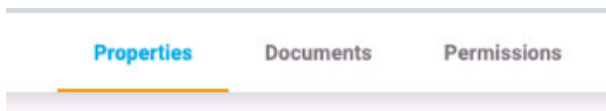
The Stratus to Go option exports the exam in a read-only Windows version of the Review client. This is useful to be able to send the exam to someone who does not have the client installed. The recipient can review the exam and view the patient demographics.

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. Failure to do so can result in incorrect interpretations.

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

 **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

 **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

 **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

 **Clinical History**

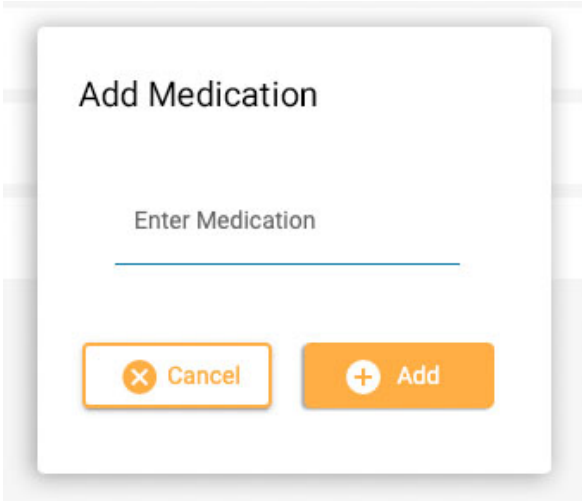
This page contains a free text field where the patient's clinical history can be typed or pasted in. A checkmark indicates whether or not skull defect is present. Pre-known disorders can be added by selecting them from a dropdown list. Click the pencil icon to edit the page, then Save to save any changes.

Medication

 **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.



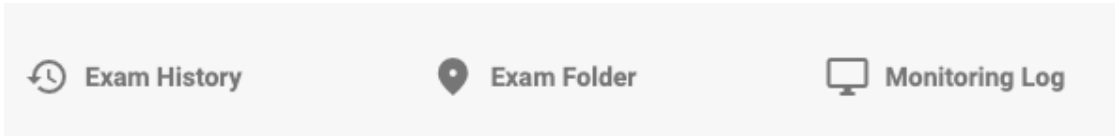
Be sure to click Save after making any changes. An administrator will see your added medication and can choose to confirm it to the active list. Whether this happens or not, the medication will still appear on that patient's medication list.

Exam



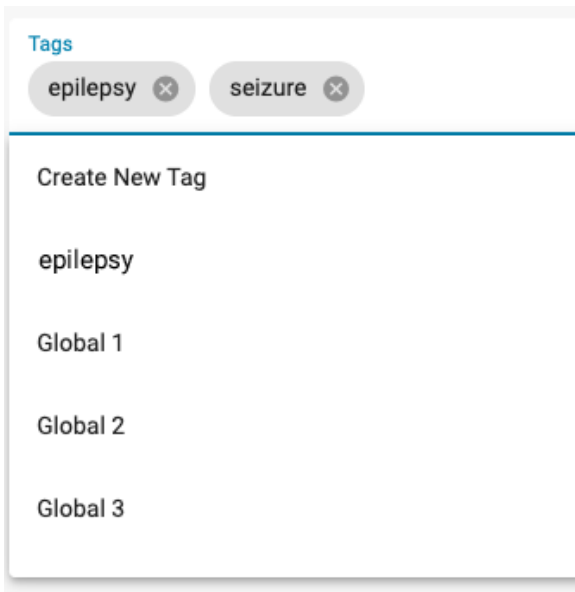
This page contains details about the exam itself, such as Exam Type or Duration. The read-only view of this page does have one editable item on it: the Assigned To field. To edit any of the other items, click the pencil icon.

At the bottom of this page are three buttons. Click these buttons to show a popup window with the exam history, the exam folder, and the monitoring log for that exam. Click outside the popup to close.



Tags

Tags are labels that you can apply to an exam so you can later search on the [visit list](#) for exams containing those tags. Click the Tags field on the editable page to select a tag on the list, or select Create New Tag to create a new personal tag. The tag you create here will also be added to your [My Tags](#) list.



Referral

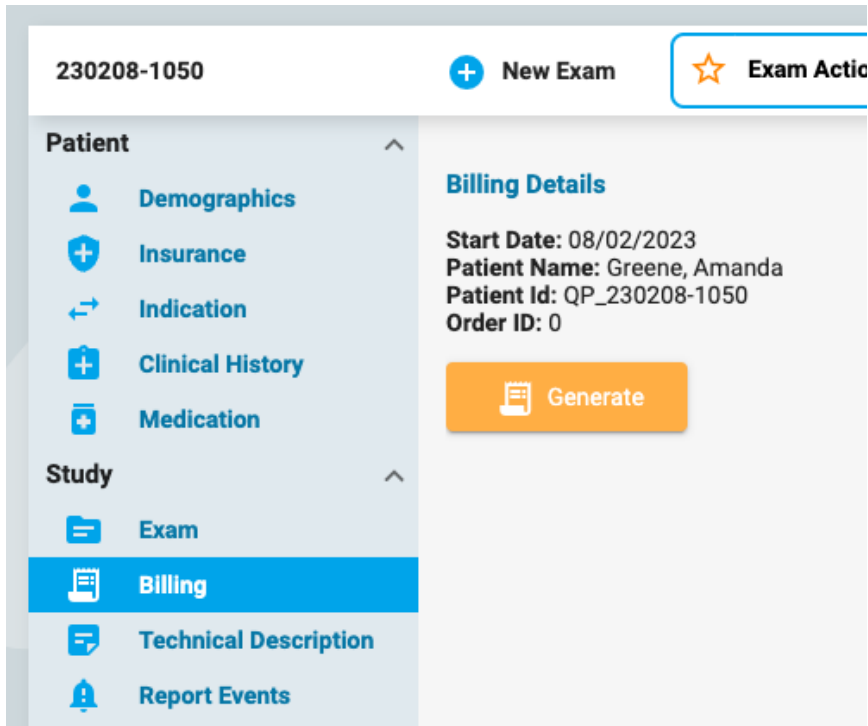


This page contains details about the patient referral, such as ICD-10 Codes or Monitoring Type. Click the pencil icon to enter the editable mode.

Billing



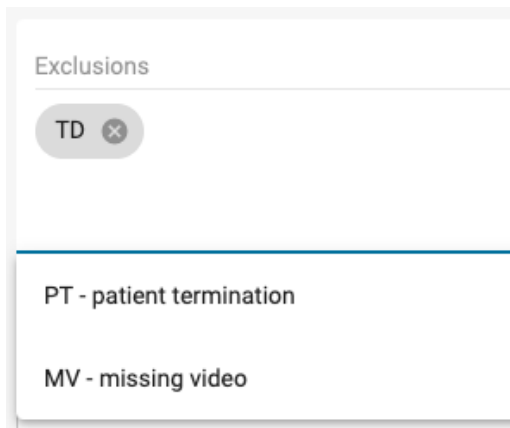
Use this page to generate billing information for a recorded exam. Press the yellow Generate button to generate the info:



A table appears dividing the exam into 24 hour periods, with start and end times, duration, CPT codes and other info. The Generate button changes into a Regenerate button in case the info needs to be regenerated.



Some items on the table can be edited by pressing the yellow pencil icon. Add CPT codes or Exclusions by selecting them one at a time from the dropdown list. Click the x on the items you want to remove. Click Save to save the changes.



Note: The Billing feature is not available on all systems.

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.

Report Events



The page displays lists of events of the Report Event type, separated by type. The lists show date and time of event, whether the event is typical, atypical or undetermined, and several spaces for recording

notes or EEG description. There is also a checkbox indicating whether the event should be excluded from the report. Click the the yellow pencil icon to change any of the editable info. Note that multiple events can be excluded by clicking the Exclude checkbox on the header of the event type.

EEG Description



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

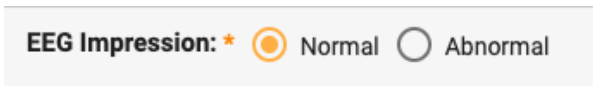
Quick Text

There is a small plus mark button to the lower right of each free text box. Press this button to save a "quick text" that you can save and quickly use again. See the [Quick Text](#) section for more information.

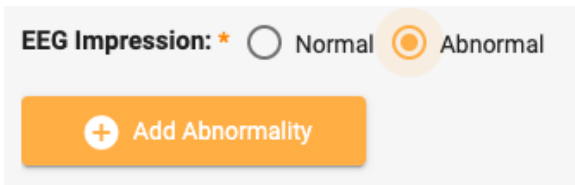
Impression



This page is for documenting the interpretation of the exam. If the EEG impression is normal, select the Normal option and type in any additional notes you may have in the 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. Add comments specific to the abnormality in the text field. When you are done, click Ok, and you can either add another abnormality, or press Save if you are finished.


Abnormality 1

Abnormality: Slowing Interictal Discharges Seizures Burst Suppression

Prevalence ** State **

Location*

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



Frontal Left
 Occipital Left
 Parietal Left
 Temporal Left

Arial 8 B I U A

Comment

epilepsy 1

Quick Text

If you frequently use the same or a similar text when writing an impression or an EEG description, you can save that text for reuse another time. Just click the plus sign at the bottom right of the text box to open the Save Quick Text popup. After typing in your text, give your text a simple, descriptive name and click Save.

Save Quick Text

Give your text a descriptive name *
 epilepsy 1

Arial 8 B I U A

Insert text here ...

Impression

A Quick Text "button" with your descriptive name now appears below the text box. Your text is saved and can be inserted simply by clicking it. You can edit the text after it is inserted for a one-time edit, or edit the reusable text by clicking the edit icon (pencil) on the Quick Text button.

EEG Clips



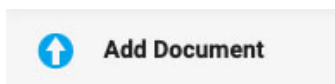
This page shows a list of any EEG screenshots which were captured during review, with date and time of capture and any annotations that have been added. From the read only view, you can view or download the clips using the eye or the down arrow icons. Press the pencil icon to edit or add an annotation,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

Edit EEG Clips

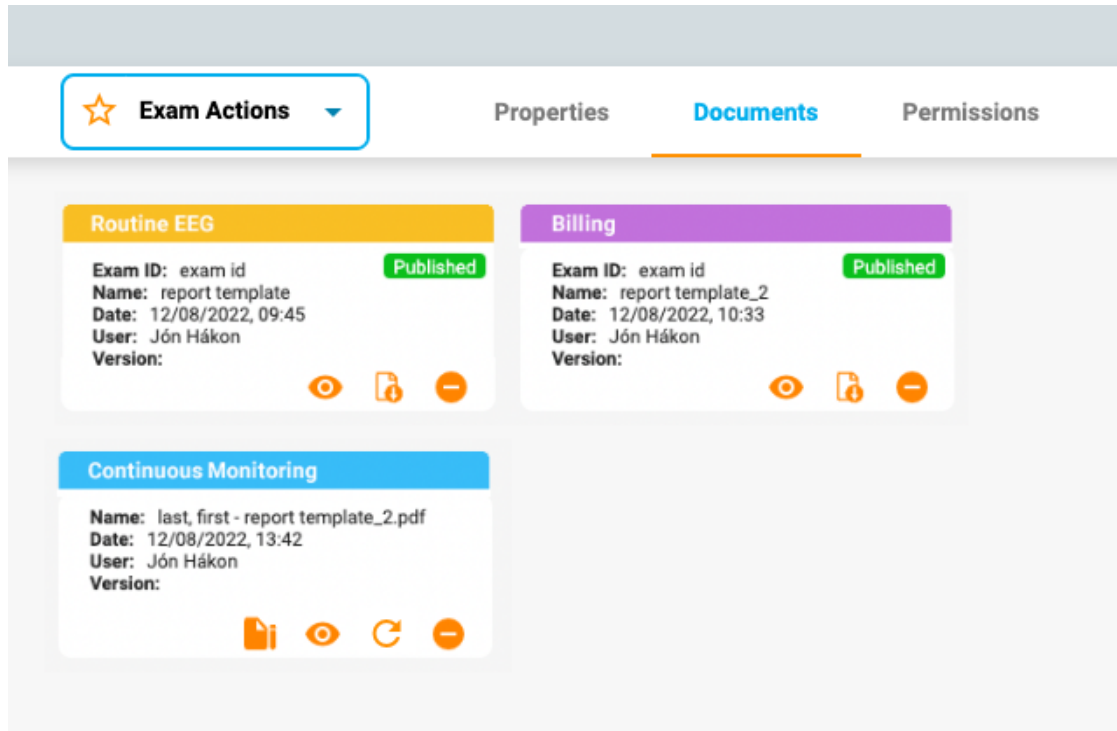
Date/Time	Annotate	
28/06/2021, 14:48	annotation	

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 saved on the Preview Report window. [See the Exam Actions section for more info about the Preview Report tool.](#) Documents can also be uploaded from your computer using the Add Document button, located at the top left of the Documents folder.



Document "cards" on the documents tab:



The header of each card contains the report type using the color that was assigned by an admin user in the Report Templates settings. The colors make it easy to quickly locate reports of a similar type.

Each card has buttons to view, refresh, or delete the document. A sign button appears before the document has been signed. After signing, a download button appears.

View



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

Refresh



This button will either update a document or regenerate a report. 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 New Report option on the Exam Actions menu instead of the Refresh 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!

Note: Only users with the Support role ability can delete published reports.

Sign



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

Download



After a document is signed, a download button appears. Click to download the document to your computer. The file name of the document contains the patient name followed by the report name.

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.

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

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.

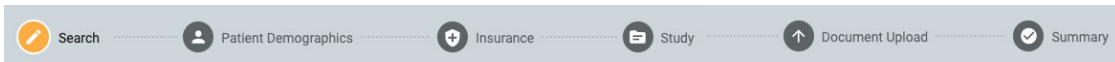
Status Tracker

This page tracks the progress of patient referrals and exams. This page looks similar to the Patient Visits page, except that the cards are sorted by progress stage. The number after each heading indicates the number of items in that stage. Another difference is that the Patient Name is shown instead of the ID.

As on the Patient Visits page, you can click on any card and go to the patient folder. Or click on the review button to open an exam in Review.

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.

Search for Patient

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

Amanda

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

Amanda

Greene

Mobile

Mobile

Primary Contact

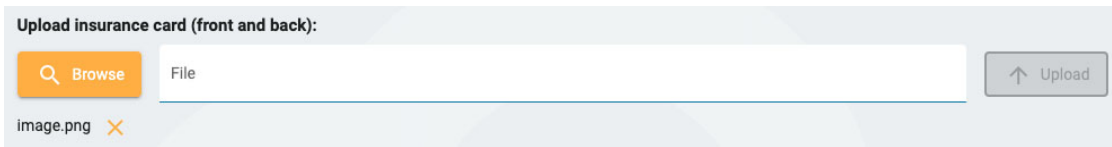
Patient is Primary Contact

Mobile

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.



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

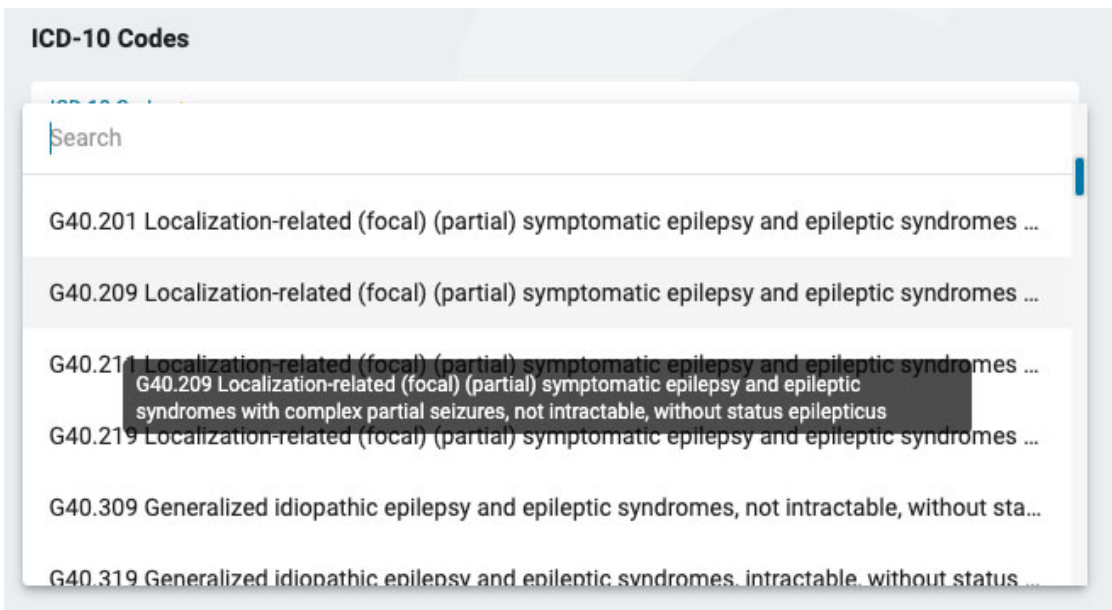
Fill out if the patient is not the insured party:

Insured is same as Primary Contact

Insured First Name Insured Last Name Insured Date of Birth *

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.



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	X
G40.019	Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, intractable, without status epilepticus	X

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.

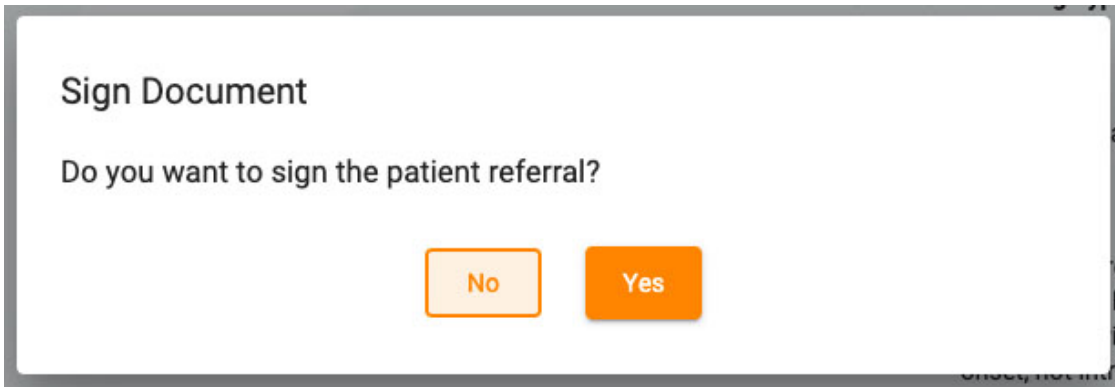
Document Type *

Type	Name	
Insurance Card	image.png	X

Summary

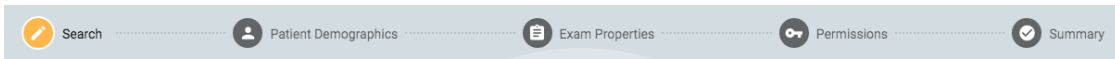
The summary page displays all the information entered on the previous steps, with a yellow edit button (pencil icon) beside each section. Click the pencil to go back to that step if you need to correct something. If everything looks good, you can press Create Referral at the bottom right.

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



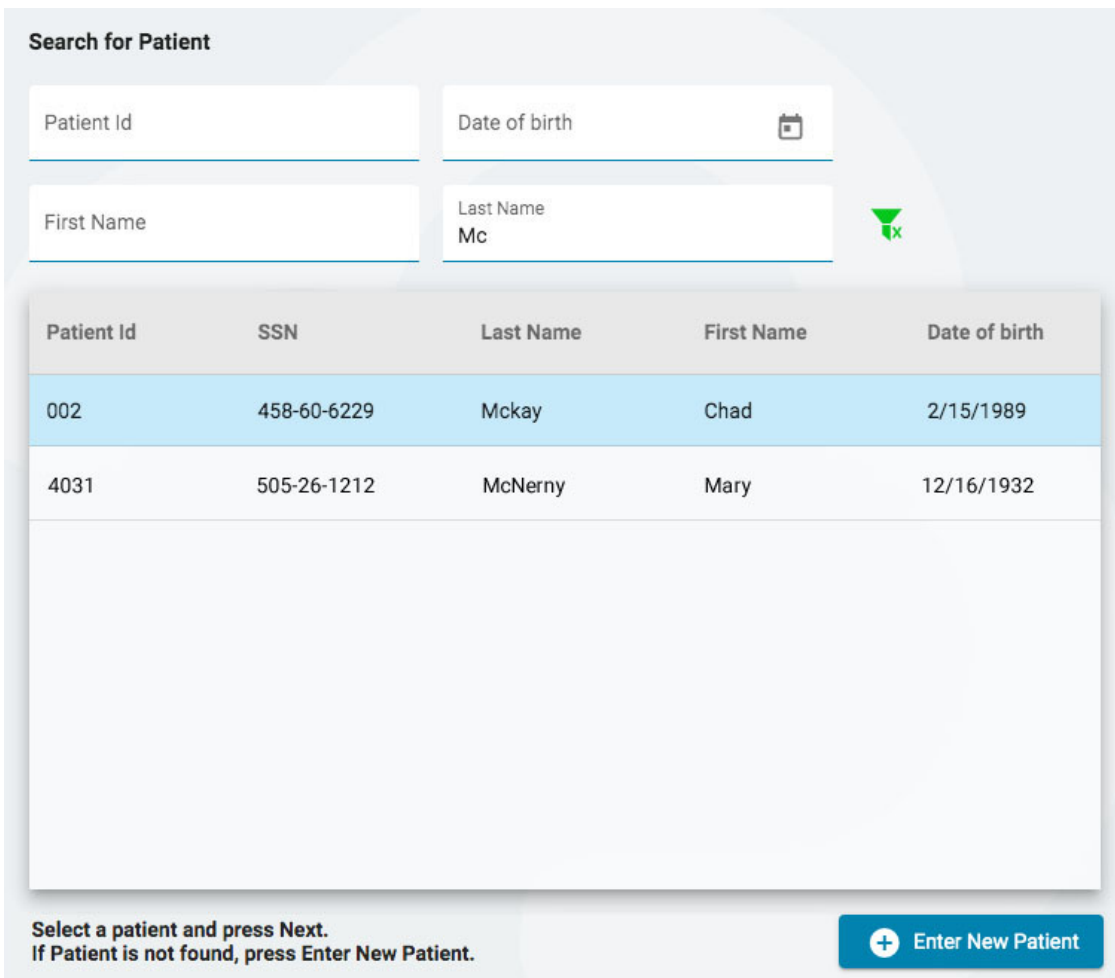
Patient Admission

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

Search fields: Patient Id, Date of birth, First Name, Last Name (Mc). A green search icon is visible to the right of the Last Name field.

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.

[+ 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).

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.

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 a Stratus EEG Acquire system or another EEG recording 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.

The screenshot shows the 'Attach Files' step of the upload process. The interface includes a navigation bar with icons for 'Attach Files', 'Search', 'Patient Demographics', 'Exam Properties', 'Permissions', and 'Upload'. The main content area is split into two parts. On the left, there is a dashed blue box containing a cloud upload icon, the text 'Drag & Drop here or browse for', and two orange buttons labeled 'Files' and 'Folders'. Below these buttons, a file path is visible: '.ieeg.keeg.ieegz.keegz.edf.eeg.bdf.e.erd'. On the right, there is a 'File Info' section with a blue header. It contains two columns: 'Patient' and 'Exam'. The 'Patient' column lists 'Id:', 'First Name:', 'Last Name:', and 'DOB:'. The 'Exam' column lists 'Id:', 'Exam Type:', 'Date:', and 'Duration:'. Below this is an 'Attached Files' section with a blue header. At the bottom right of the interface, there is a 'Next >' button.

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%;"><div style="width: 100%;"></div></div>	100%	Completed 
Delete Video	44300-2404	443003108	1/28/2020	<div style="width: 100%;"><div style="width: 100%;"></div></div>	100%	Completed
Upload Exam	26674-8823	266742010	1/28/2020	<div style="width: 40%;"><div style="width: 40%;"></div></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%;"><div style="width: 0%;"></div></div>	0%	Failed  
Seizure Detection	11220-5659	232355038	1/27/2020	<div style="width: 80%;"><div style="width: 80%;"></div></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.

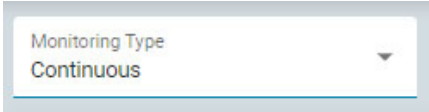
The blue header of each group shows the user group name, and below that are the names of the monitoring techs assigned to that group. Below that is a chart that displays each patient name, a countdown timer, the recorder ID and the patient ID.

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

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 is auto-refreshed periodically. 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.

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.

Full Name	User Name	Role	Monitoring Group	Status
Stefan Hernandez	StefanH	Physician	[Dropdown]	Logged in
Nicole Jenkins	NicJ	Technologist	[Dropdown]	Logged in
Claire Johnston	Claire	Technologist	[Dropdown]	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.](#)



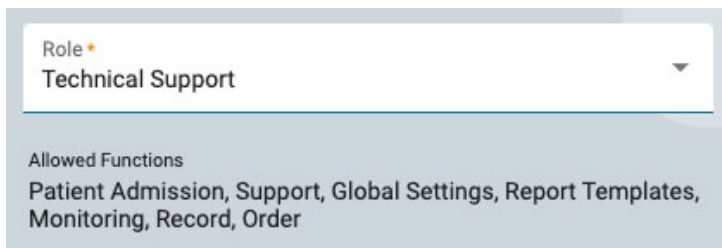
Add, Delete or Edit User

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 under 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.



Click the User Groups field to open a popup window where you can select which user and monitoring groups apply.

The screenshot displays a user management interface with a search bar at the top. Below the search bar, there are two main sections: "User Groups" and "Monitoring Groups".

User Groups

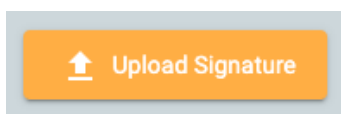
Group Name	Selected
Default	<input checked="" type="checkbox"/>
MyPhysicianGroup	<input checked="" type="checkbox"/>
Admin	<input checked="" type="checkbox"/>
Pediatric Group	<input type="checkbox"/>

Monitoring Groups

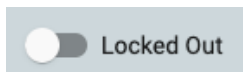
Group Name	Selected
Monitoring Group A	<input type="checkbox"/>
Monitoring Group B	<input type="checkbox"/>
Monitoring Group C	<input type="checkbox"/>

At the bottom of the interface, there are two buttons: "Cancel" (with a close icon) and "Save" (with a save icon).

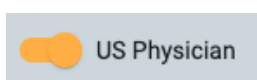
Press the Upload Signature button to upload an image file, such as a .jpg or .png, with the user's signature.



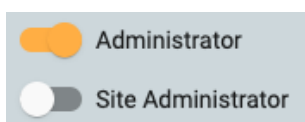
The user can be locked out temporarily by toggling the Locked Out toggle, and later allowed access again.



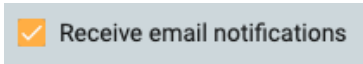
If US Physician is toggled on, an additional set of fields for physician details appears to the right.



When Administrator or Site Administrator are toggled on, an icon appears on the main Users list (green A or blue S respectively).



When the email notifications checkbox is checked, the user will receive notifications, e.g. when an exam is assigned to them.

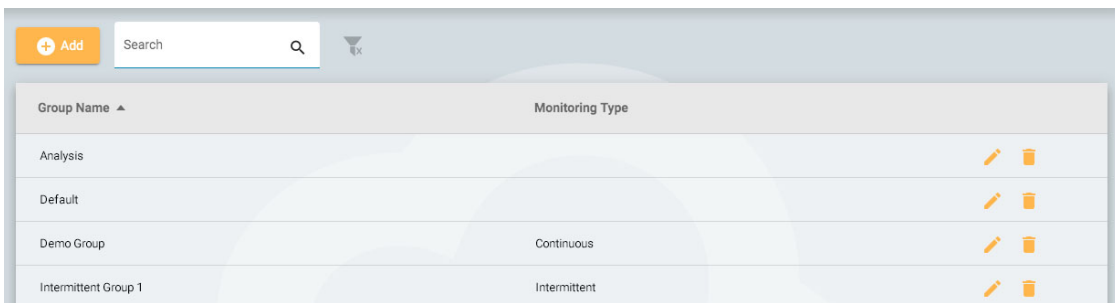


Be sure to click Save when finished adding a new user or editing an existing one. New users will receive an email with instructions for signing in.

Note: Administrative users are able to edit any user's details.

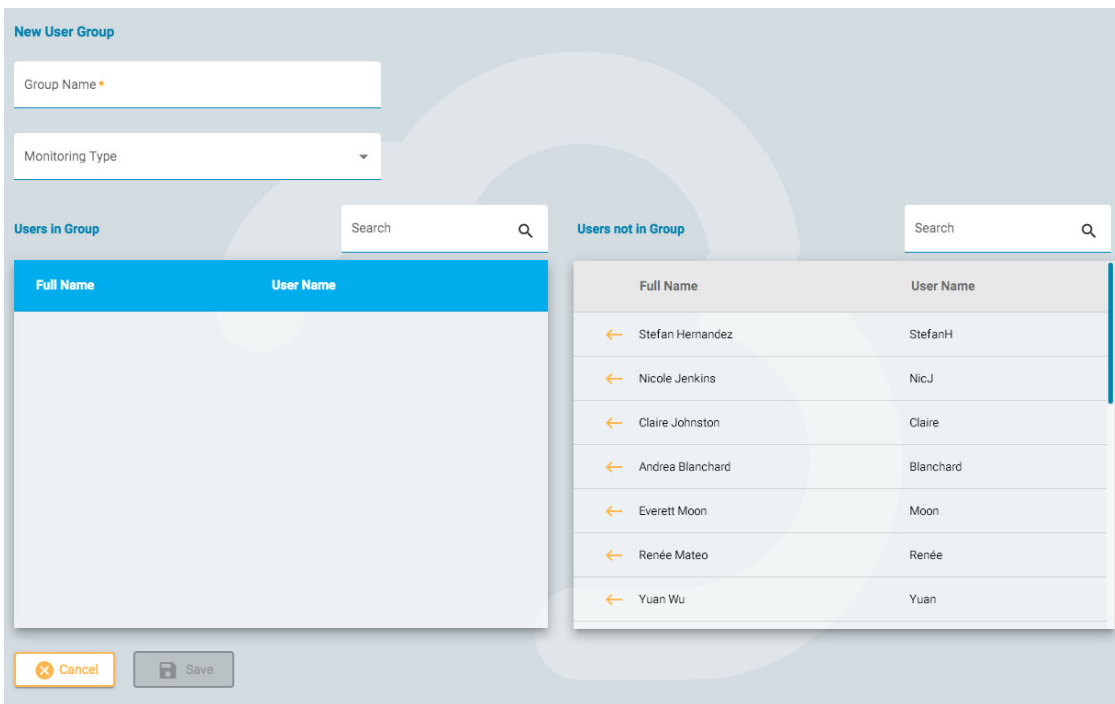
User Groups

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



Create a Group

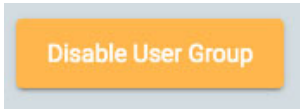
To create a new group, press the Add button. You must first enter a name for your group, select a monitoring type, and then populate the group with users. This is done by pressing the arrow to the left of the user's name on the list on the right. The user is then moved to the "Users in Group" list on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



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.



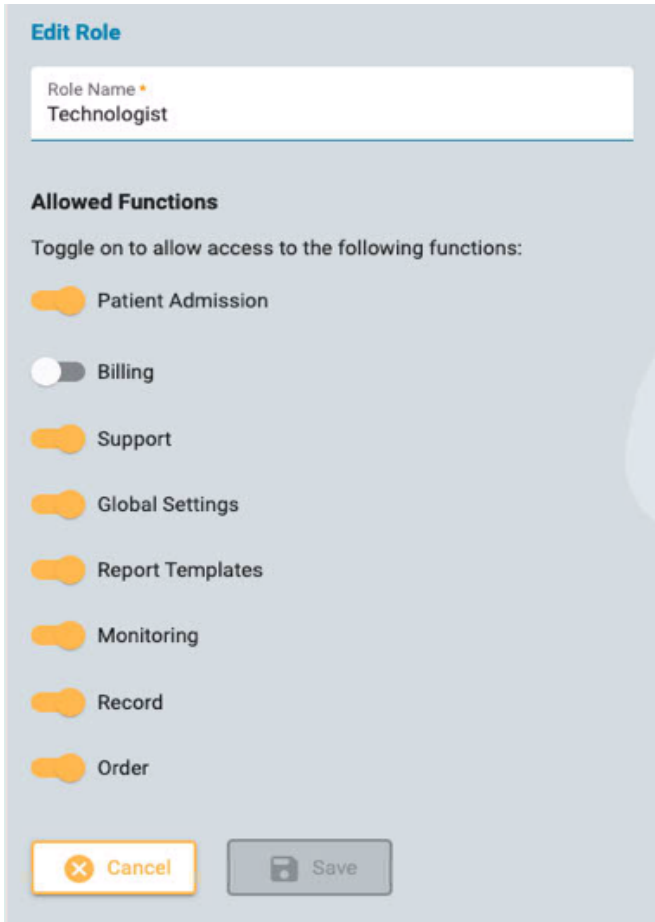
Roles

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.

The Global Settings function gives users the ability to create global and restricted settings in EEG Settings. These users can also create settings on another user's behalf. [See the EEG Settings section](#) for more information about what this role ability allows.

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.



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. You can also enable to send the code by text message to a phone (SMS).

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

Description

Disabled

Monitoring Type
Continuous

Modality Name *
Acquire Pro

Review Perspective
Review

Acquisition Perspective
Routine

Report Template

Workflow States in Exam Type

Workflow State	Report Template
Initiated	<input type="text"/>
Scheduled	<input type="text"/>
Recording	<input type="text"/>
Recorded	<input type="text"/>
Uploaded	<input type="text"/>

Workflow State

⋮
Pruned

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

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

Cancel Save

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. You can add a new template to the list, or edit an existing one.

Add Report Template

Press the Add button to create a new report template.

New Report Template

Name *

Based On Report Template *

File

Color

Allowed User Groups Search

Denied User Groups Search

User Group
← Default
← ReportGroup
← monitoring group
← MonitoringGroupC
← Kvikna Admin
← No support group
← heidarUserGroup

Fill in the name and choose a template to base your template on. Alternatively, upload a file to use as a template. See the Word and Stimulsoft Report Template sections below for more info on uploading your own templates.

Choose a color from the dropdown list. This color will appear on the header of the report cards on the Documents tab of the patient folder. Assigning a color makes it easy to quickly identify reports of a similar type.

Associate User Groups

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

Click Save to save your changes. These settings can be edited later by clicking the yellow pencil icon after the report template name on the Report Template list.

Edit Report Template

To edit a report template, click the yellow pencil icon after the template name. This opens up a page very similar to the Add Report Template page explained above. Make your changes and press Save.

Report Templates - Word

If you are a user of the desktop Centrum application and have Microsoft Word installed with the Stratus EEG Report tab add-on, then you can create or edit Word report templates. Follow the instructions in the Stratus EEG User Manual. These templates are in .doc format and can be uploaded when adding a new template, described above.

Report Templates - Stimulsoft Users



The Stimulsoft Designer has been embedded into the Report Template page. Click the Designer button to access this tool. For information on using Stimulsoft to create a custom report, please refer to the Stimulsoft documentation found on their website. Stimulsoft reports are in .mrt format and can be uploaded when adding a new template, described above.

Retain Html Formatting

To retain the html formatting applied in Stimulsoft, be sure to check the Allow HTML Tags checkbox under Text Additional settings.

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.

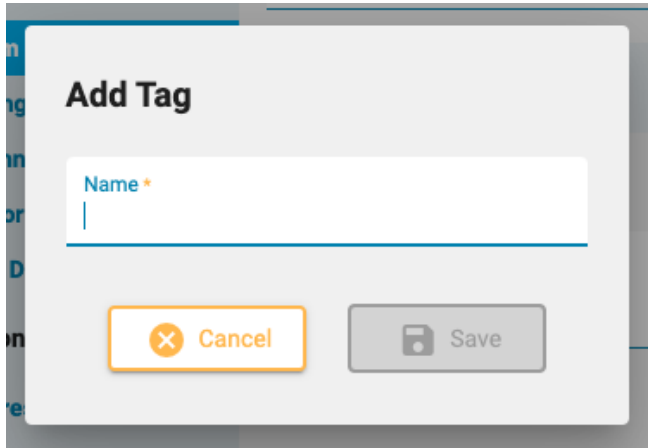
Click the pencil icon to edit the Recorder ID name, or to associate it to another default exam type or site.

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

Tags Manager

Tags are labels you can add to an exam on the [edit exam details](#) page in the patient folder. You can then search for exams with those tags on the [Visit List](#).

Admin users can create global tags on this page that are available for everyone to use. Click the Add button to create a new global tag.



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

Note: This feature is not available on all systems.

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

Medication

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

Edit Medication

Medication
Aptiom

Status
Active

Sites Management


The Sites Management page has several options pertaining to sites.

Billing

Download Billing Report

Site *
Default Site

Year * Month *
February

 Download



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

Perspective Sync

Perspective Sync

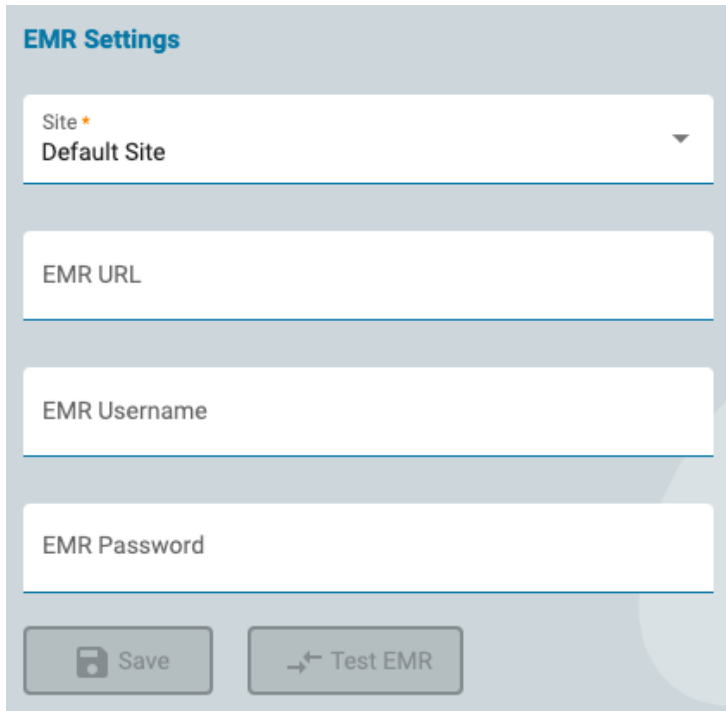
Site *
Default Site

Push Sync	Name
<input type="checkbox"/>	Neonatal
<input type="checkbox"/>	US Default
<input type="checkbox"/>	Routine
<input type="checkbox"/>	Review
<input type="checkbox"/>	PSG
<input type="checkbox"/>	Acquire

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

EMR Settings



EMR Settings

Site *
Default Site

EMR URL

EMR Username

EMR Password

Save Test EMR

Use this page to connect to the Mirth Connect software. Mirth interfaces with various types of EMR systems, making it possible to import external patient data into Stratus EEG while admitting a new patient.

Select your Site, enter the URL to Mirth Connect and your login credentials, then press Test EMR to connect.

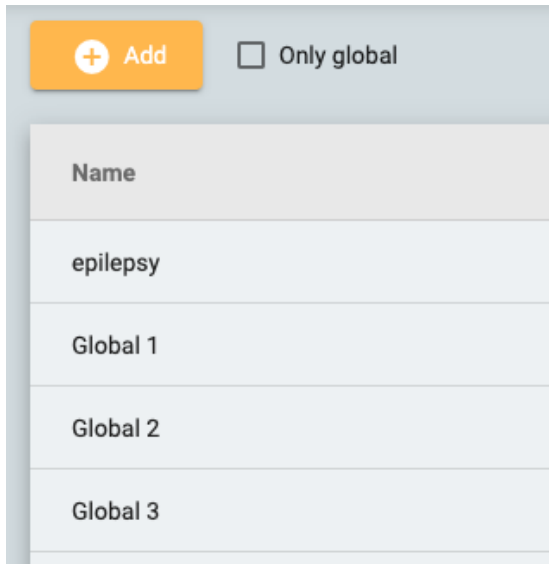
Auditing

The Auditing page keeps a searchable log of actions in the system by users. You can filter the list by several criteria. 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. Click the download button to download the record as an Excel file.

My Tags

Tags are labels you can add to an exam on the [edit exam details](#) page in the patient folder. You can then search for exams with those tags on the [Visit List](#).

Tags can be global or personal. The tags you create on your My Tags page or on the edit exam details page are your own personal tags. Global tags are created by an admin user and are available for everyone to use.



Click the Add button to create a new personal tag. Click the Only Global checkbox to show only global tags on the list. You can edit or delete your own personal tags, but you cannot delete tags that have been applied to an exam.

EEG Settings

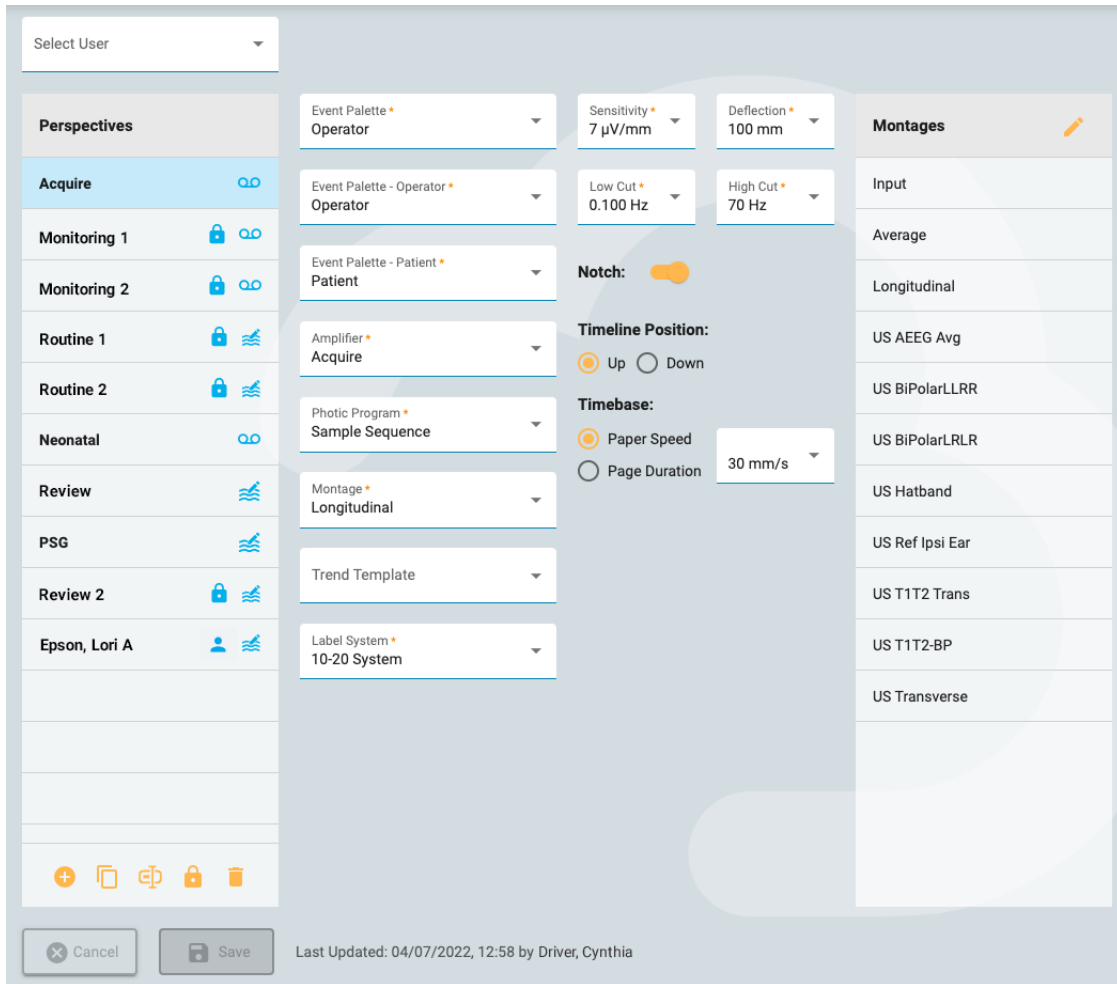
The settings editors under the EEG Settings tab allow users to have control of how they review exams. There are three levels of permissions that apply to settings:

- Global - available to every user.
- Restricted - available to users in specific user groups.
- Personal - only available to one user.

In order to create or edit Global and Restricted settings items, the user must be assigned a role with Global Settings allowed. This is done by an admin user in [Roles](#). Additionally, users with the Global Settings ability can create personal settings on behalf of another user. All users can create personal settings for themselves.

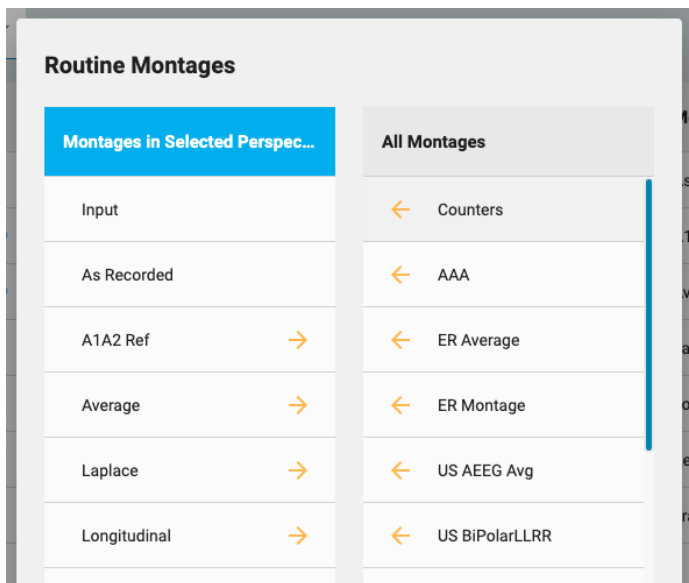
Perspectives

A perspective is a predefined combination of settings that you can quickly apply during acquisition or review. Apply a review perspective via a dropdown list on the [Review toolbar](#). Acquisition perspectives can be applied via a dropdown in the Stratus EEG Acquire application. On the Perspectives tab under EEG Settings, you can create and edit your own perspectives. Users who have been assigned a role with global settings allowed can create global perspectives available to everyone, and can also create perspectives intended for specific users or groups.



On the left side of the perspectives editor is the Perspectives list. Select a perspective to highlight it and the settings for that perspective are displayed to the right. Here you can choose the default settings for the perspective, such as the event palette and montage that you want displayed. The settings vary slightly depending on whether the perspective is for acquisition or review.

On the right is the Montages list, which shows the montages that are included with the selected perspective. These montages will be available via the montage selector on the Review toolbar, in addition to the default one that will be displayed initially. Edit the list by clicking the yellow pencil icon and using the arrow buttons to move montages in or out of the list.



Create a New Perspective

At the bottom of the Perspectives list is a row of buttons:



Press the Add button to create a new perspective. The following popup appears:

Add perspective

Perspective Name *

Perspective Type:

Acquire Review

Cancel Add

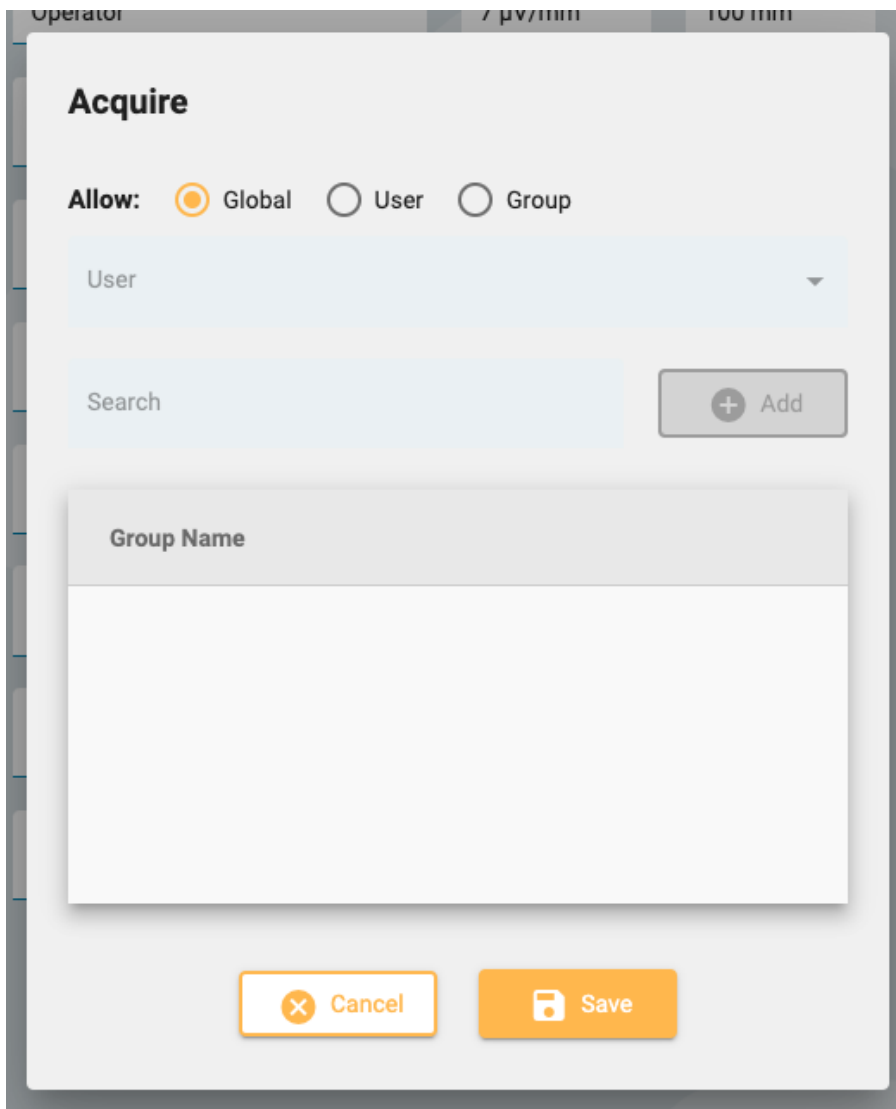
Type a name for your perspective and select whether the perspective will be for acquisition or review. An icon appears after the name on the Perspectives list to indicate its type.

The rest of the buttons on the bottom of the perspectives list indicate Duplicate, Rename, Restrict and Delete.

Duplicate can be handy, for example, if you want to create a similar perspective but only change one or two things.

Restrict Access to a Perspective

Push the lock button to restrict access to the perspective to a specific user, or to one or more user groups:



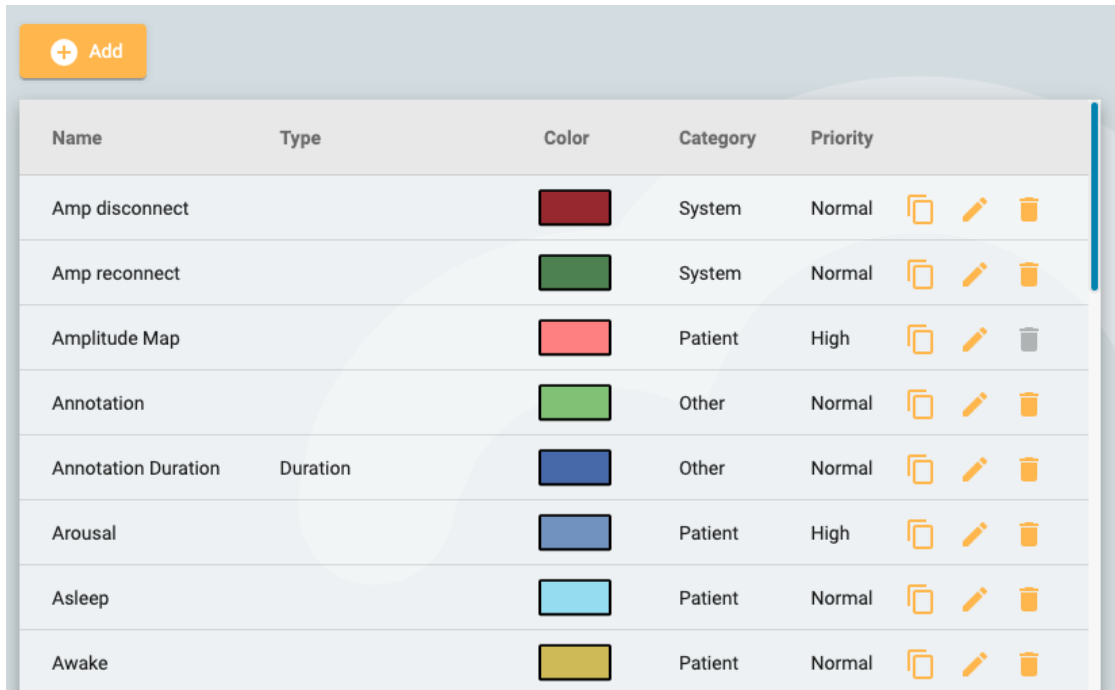
Perspectives restricted to user groups are indicated by a lock icon on the Perspectives list. Personal perspectives (restricted to a specific user) will have a person icon. You can also change the restricted perspective back to global using this popup.

































Another way to create a personal perspective is to select the user from the Select User dropdown box above the Perspectives list before adding a new perspective. Select "All" to create a global perspective.



Note: Only users who have been assigned a role with global settings allowed will be able to create global or restricted perspectives.

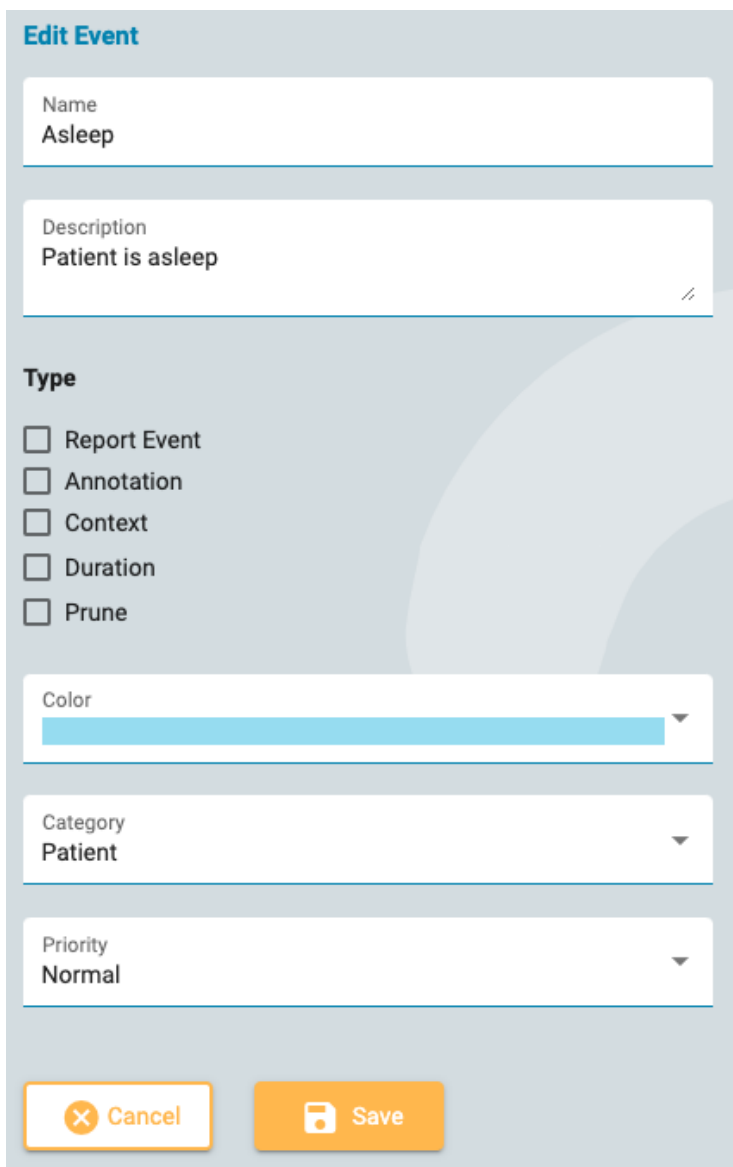
Events



Name	Type	Color	Category	Priority	
Amp disconnect			System	Normal	  
Amp reconnect			System	Normal	  
Amplitude Map			Patient	High	  
Annotation			Other	Normal	  
Annotation Duration	Duration		Other	Normal	  
Arousal			Patient	High	  
Asleep			Patient	Normal	  
Awake			Patient	Normal	  

On the Events page under EEG Settings is a list of events with their characteristics. These events can be edited by clicking the yellow pencil icon, and new events can be created by clicking the Add button.

The New Event page has the same settings as the Edit Event page.



Edit Event

Name
Asleep

Description
Patient is asleep

Type


Report Event

Annotation

Context



Duration

Prune

Color


Category
Patient

Priority
Normal

Here you can give your event a name and a description, a color, and other characteristics which help with searching for and filtering events on the Event List which is located on the [Review Panel](#).

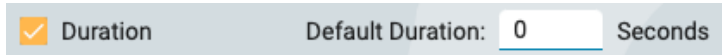
Most of these are self explanatory, except for Type, which will be explained here.

Report Event: Mark this option if you want the event to be listed on the Report Events tab in the patient folder. These events will be available to be included in reports.

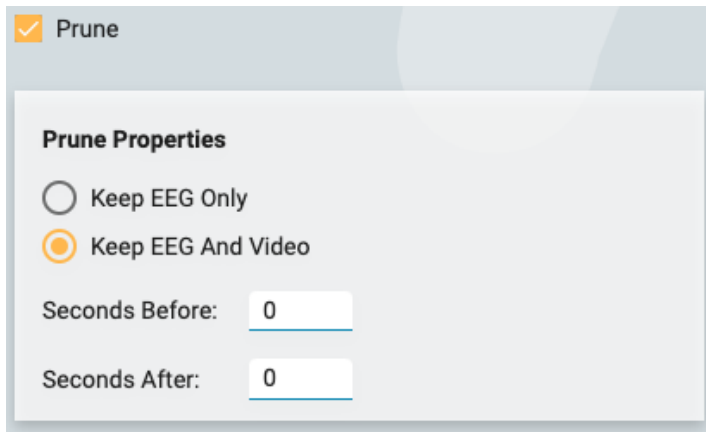
Annotation: These events are user defined. Add an annotation after the event is placed.

Context: Context events save the montage and other settings at the insertion point. This can be useful to see the context in which the event was placed.

Duration: Duration events mark a period of time. They are placed by selecting a start point and end point. You can also specify a default duration in seconds.



Prune: Prune events mark areas of the exam to keep after pruning. You can choose whether to save EEG only or EEG and video. You can also specify the number of seconds before and after the event is placed to keep.



Note that more than one type is possible, for example a prune event which is also a duration event.

Note: Events are global. Only user with the Global Settings role ability can create events.

Event Palettes

An event palette is a set of events grouped together for reviewing a specific type of exam. You can then quickly [switch between palettes](#) using the dropdown list at the top of the event palette on the Review screen.

The screenshot displays the StratusEEG interface for managing palettes. On the left, a 'Select User' dropdown is at the top. Below it is a 'Palettes' list with items: Clinical EEG (with a lock icon), event palette (with a person icon), Neonatal, Operator, Patient, and PSG. At the bottom of this list are icons for adding (+), copying, pasting, locking, and deleting. The 'Clinical EEG' palette is currently selected and highlighted in blue. To the right, the 'All Events' section shows a list of events: Amp disconnect, Classification Duration, Comatosed, Connectivity, Copy Patient, Deblock, Diary, Disconnected, Drop, Drowsy, and Dummy. Each event has a left-pointing arrow to move it to the selected palette and a right-pointing arrow to move it back. At the bottom of the interface, there are 'Cancel' and 'Save' buttons, and a status message: 'Last Updated: 06/09/2022, 20:19 by Eugene Shamshurin'.

Click the Add button at the bottom of the Palettes list to create a new palette. Give the palette a name, then click the arrows on the All Events list to move them onto the list which will now have the new palette name you just created. To edit a palette, just select the palette on the Palettes list and remove or add events by using the arrows.

If you are a user who has been assigned a role which includes Global Settings, you can create global palettes (select All on the Select User dropdown before creating the palette) or a personal palette for a specific user (by selecting the user's name before creating the palette). Alternatively, you can restrict access to palettes after they are created by selecting the palette and clicking the Restrict button (the lock icon at the bottom of the Palettes list).

Restricted palettes will have the lock icon after the palette name and personal palettes will have a person icon after the name.

Montages

Choose the Montages option under the EEG Settings submenu to create and edit montages.

Create a Montage

On the left side of the page is the Montage list, with a group of buttons at the bottom. Click the Add button to create a new montage.

On the New Montage popup, give the montage a name and select the label system. Click the Add to Perspective box to display a dropdown list of available perspectives. Select the perspectives you want the montage to appear in. Remove them by clicking the x next to the perspective name.

Access to Montages

Most users can only create personal montages, but if you are a user who has been assigned a role with Global Settings allowed, then you can create global montages or montages restricted to a selected user or group. When Global is selected, every user can use the montage. Select User to activate the user dropdown list. This montage will then be available only to that user and the person icon will appear after the name on the montage list. Select Group to activate the User Groups dropdown. Select the groups you want to have access, or remove groups by clicking the x after the group name. These montages will show the lock icon after the name on the montage list. Click Save and your new montage is added to the Montage list.



Global users can use the Select User dropdown to observe another user's montages on the montage list, or select All to see all montages.

Adding Channels

With the montage selected on the list, you can now add channels to it by clicking an Active then a Reference electrode on the head diagram on the right. The rest of the options - Trace, Color, Visible and Special are completed automatically with the most likely choices, but you can change them by clicking on them.

Alternatively, you can enter active electrode by selecting it from the dropdown list that is activated when you create a new montage. The Reference dropdown is activated automatically after a selection is made. When the reference is selected a new line is created.

A third method for adding channels is to use the keyboard. Type in an active channel and press the Enter key to advance to reference. Type in the reference and press Enter to create a new line.

Checking the Special checkbox opens an extra set of options, shown below:



Edit a Montage

With the montage name selected on the montage list, you can add channels as described above, or delete them by clicking the trash icon. Change individual items such as trace color by clicking on them.

Change the order of the channels on the list by using drag and drop: grab the six dots icon on the left of the list to drag the row to a new position. Alternatively, select a channel row and use the up/down arrows located at the bottom of the channels list.

Click the pencil icon at the top right of the channels list to open the Edit Montage popup, which shows the same options as the New Montage popup described above.

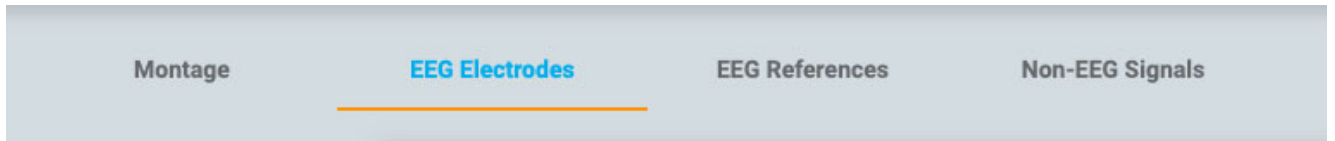


Besides the Add button, the buttons at the bottom of the Montage list are Duplicate, Rename, and Delete. Select a montage from the list to perform these actions. Duplicate is handy if you want to create a similar montage and only change one or two things, or to duplicate a montage to assign to another user.

Global Settings

In addition to being able to create global montages and montages for other users or groups, users with the Global Settings role ability can modify the settings of EEG Electrodes, EEG References and Non-EEG Signals.

EEG Electrodes



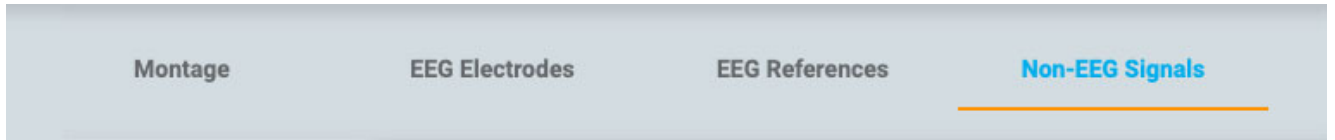
Assign electrodes to a Label System, give them a color and assign Azimuth and Longitude values.

EEG References



Create reference channels and assign them a weight. Check the Adaptive Artifact Rejection checkbox to exclude channels with an unexpectedly large amplitude from the Average Reference calculation for each sample.

Non-EEG Signals



Use this tab to create non-EEG signals.

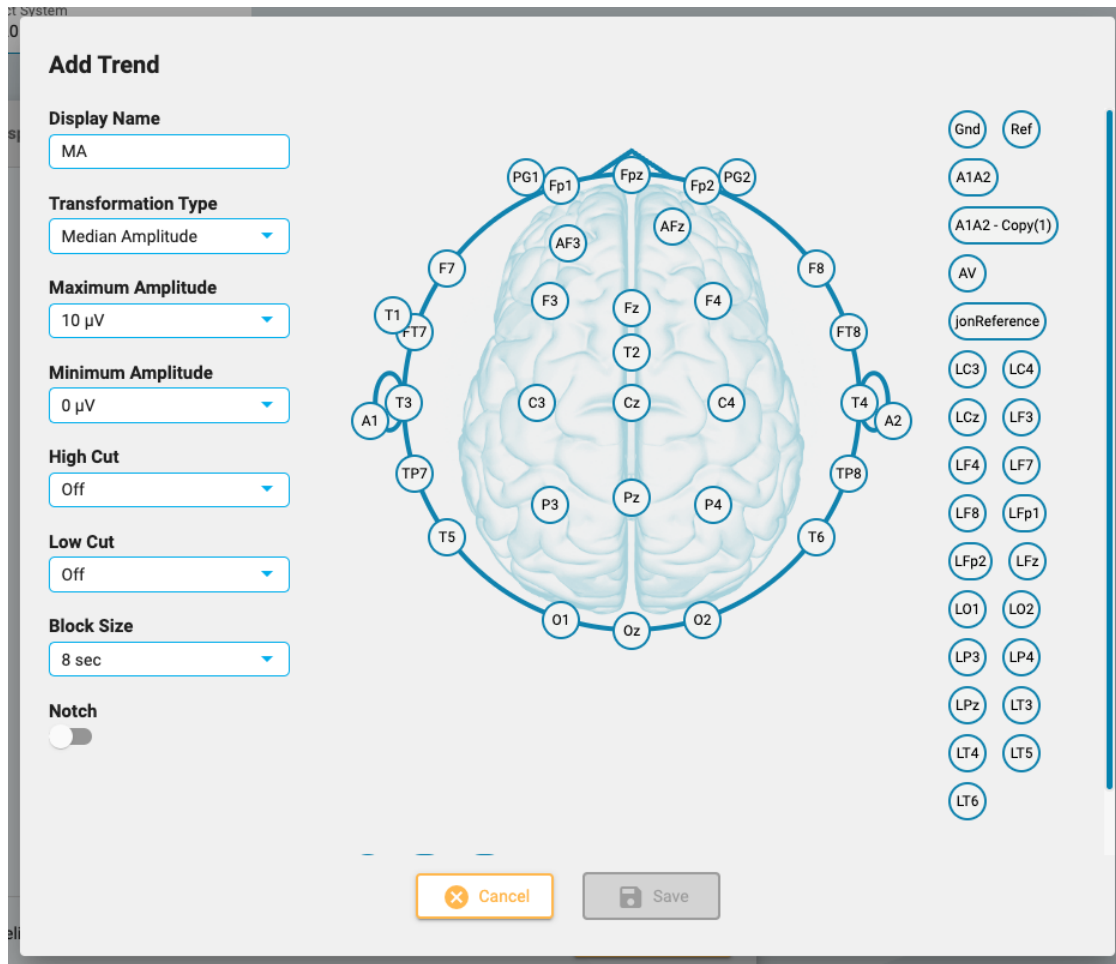
Trend Templates

On this page under EEG Settings, you can create a Trend Template - a group of two or more trends that you can then quickly select via the [Trend Button](#) in the Review interface.

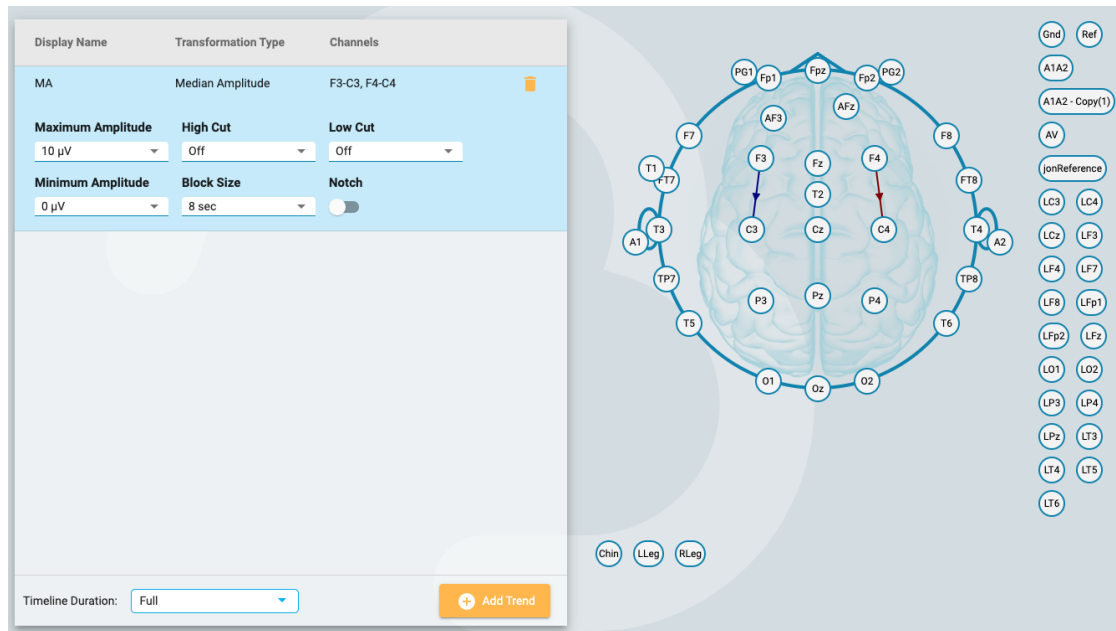
The screenshot displays the StratusEEG Trend Templates management interface. At the top, there are two dropdown menus: 'Select User' and 'Select System' (currently set to '10-20 System'). Below these is a 'Trend Templates' list on the left side, which includes items like 'Dr Johnson's Template', 'Lauren Taylor', 'My Trend Template' (highlighted), 'Neonatal Trends', 'Review Trends', and 'Springfield Clinic'. Below the list are icons for adding, copying, and deleting templates. The main area on the right is a table with columns 'Display Name', 'Transformation Type', and 'Channels', which is currently empty. At the bottom of the main area, there is a 'Timeline Duration' dropdown set to 'Full' and an 'Add Trend' button. At the very bottom of the interface are 'Cancel' and 'Save' buttons.

On the left is the Trend Templates list and to the right you will see the list of Trends contained in the selected template.

Be sure you have selected the correct electrode system on the dropdown list at the top of the page, then click the Add button at the bottom of the Trend Templates list to create a new template. Then press Add Trend at the bottom of the Trends list. The Add Trend popup appears:



Click on two electrodes on the head to create a channel. When you are done adding channels, select the options on the left side of the popup and press Save. The trend will now appear on the Trends list, and the head diagram appears to the right.



The trends added here can be edited later if needed, and you can also remove trends from the template by clicking the trash can icon.

If you are a user who has been assigned a role with global settings allowed, you can create global template (select All on the Select User dropdown before creating the template) or a personal template for a specific user (by selecting the user's name before creating the template). Alternatively, you can restrict access to templates after they are created by selecting the template on the Trend Templates list and clicking the Restrict button (the lock icon at the bottom of the list).

Restricted template will have the lock icon after the template name and personal templates will have a person icon after the name.

Exam Type Preferences

Exam Type Preferences allows a user to associate a Perspective and a Report Template to an Exam Type. When opening an exam with that exam type for review, or when creating a report, these options will then be selected by default. Users assigned a role with global settings allowed can also associate these defaults on behalf of another user by selecting the user name from the Select User dropdown.

The screenshot displays the 'Exam Type Preferences' configuration page. At the top left, there is a 'Select User' dropdown menu currently showing 'Cynthia Driver'. Below this is a table with the following columns: 'Exam Types' and two dropdown menus labeled 'Associate Perspective' and 'Associate Report Template'. The 'Exam Types' column lists 'Clinical EEG', 'Intermittent', 'Generic', and 'Video Ambulatory', with 'Clinical EEG' currently selected and highlighted in light blue. The background of the interface features a large, faint circular graphic.

Select an exam type from the list, then choose the perspective and report template you want to associate to it by selecting those on the dropdown lists. Be sure to press Save.

My Settings

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

Check the Receive email notifications checkbox to receive email notifications, for example when an exam is assigned to you.

My Settings

User Name

Full Name *

Email Address

Mobile Number

Receive email notifications

US Physician

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 *

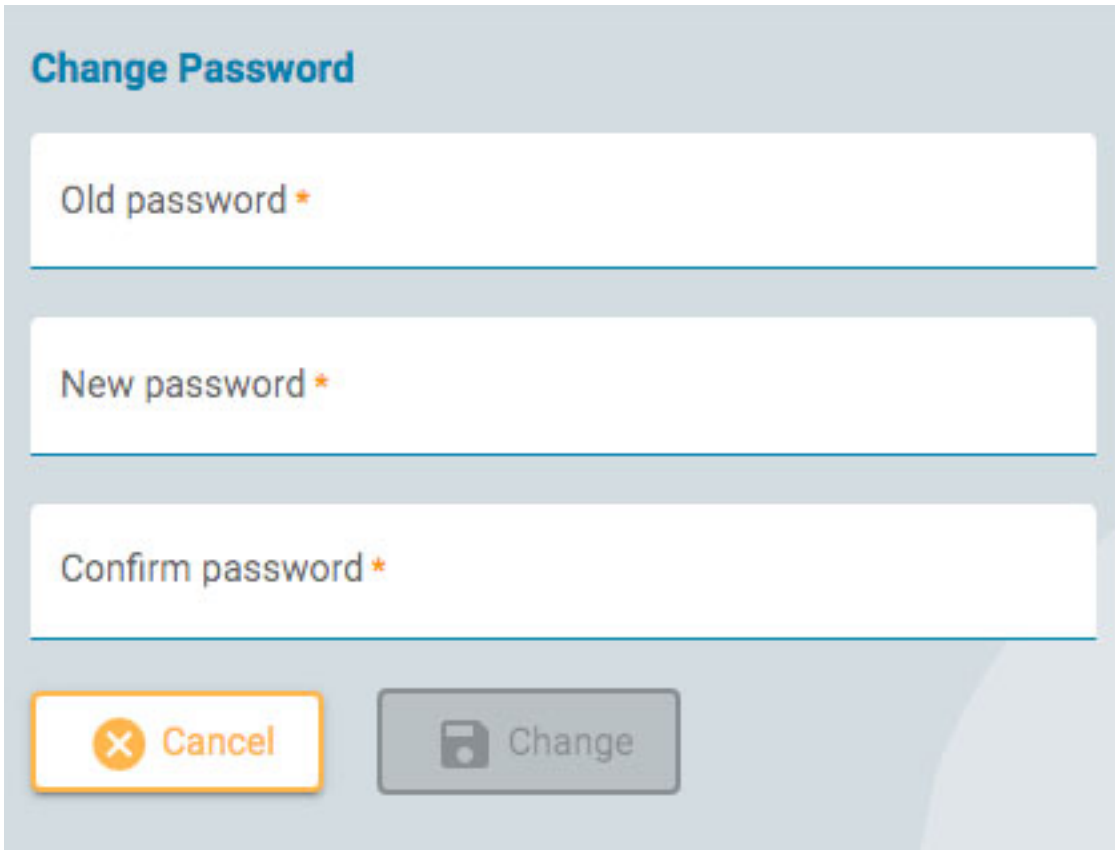
State ▼ Zip Code *

Phone Number

Credentials ▼

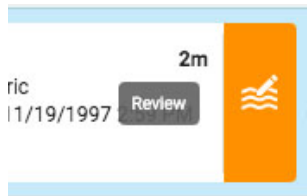
Specialty ▼

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.



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](#).

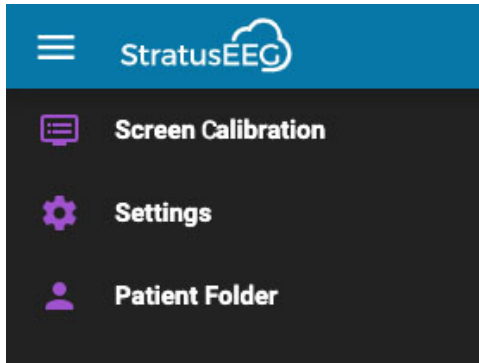


The exam opens in the review interface in a new browser tab.

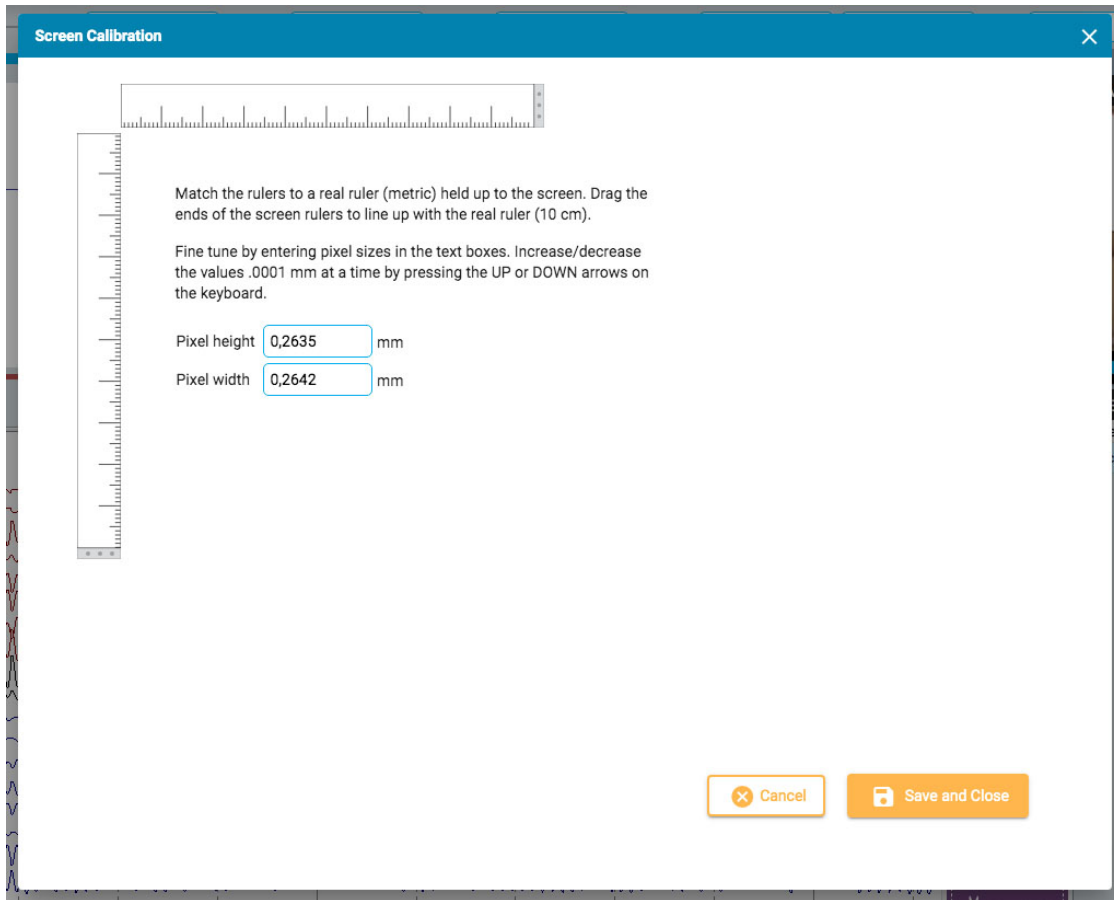


Screen Calibration

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: The screen must be calibrated before reviewing an exam for the first time on a new screen, or when adding a second screen. Failure to do so can result in inaccurate interpretations.

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.

You can also specify a custom value. Click the dropdown list to highlight the current value and type in another value.

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.

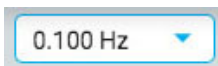


Timebase: Change the timebase of the display by selecting another value from the list, or by using the up/down arrows to bump the timebase up or down one step at a time. The default can be set to cm/s or mm/s in the Settings popup.

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

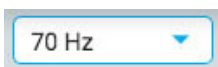


Montage: Select another montage from the list. The first button to the right quickly reverts back to the "As Recorded" montage, and the next button recalls the last used montage.



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%.

You can also specify a custom value. Click the dropdown list to highlight the current value and type in another value.

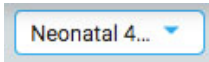


High Cut Filter: Select the cut-off frequency in Hz from the list, or turn off the high cut filter. The cut-off frequency is the frequency where the amplitude is dampened by 50%.

You can also specify a custom value. Click the dropdown list to highlight the current value and type in another value.



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

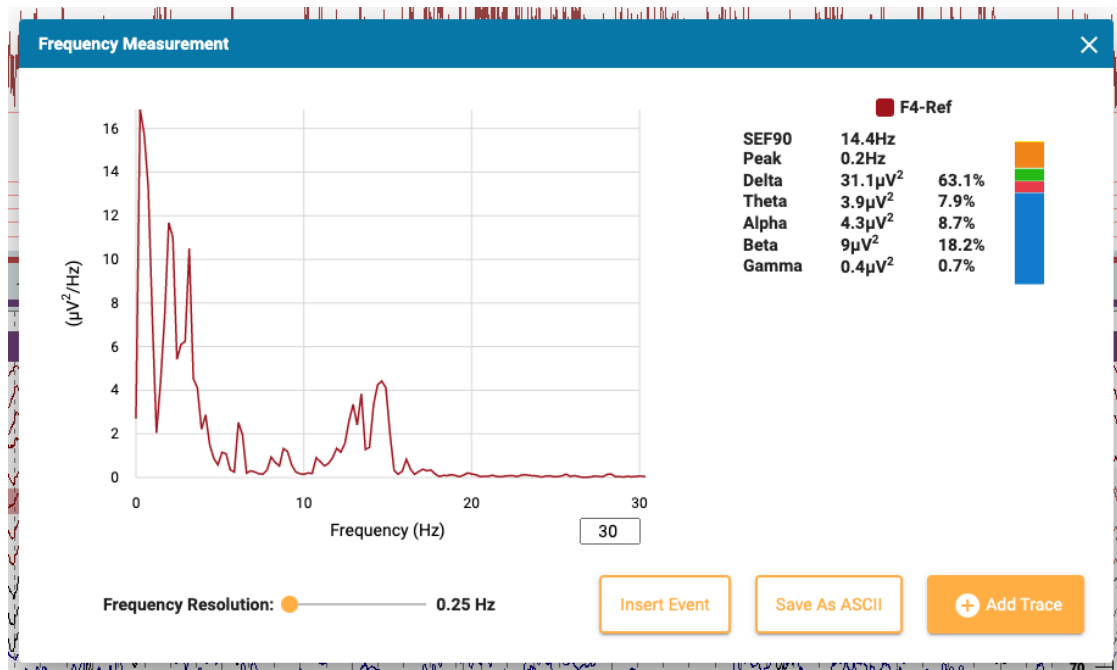


Perspectives: A perspective is a predefined combination of settings including montage, event palette, channel settings and more. Use this dropdown to quickly change the whole group of settings. [See the Perspectives page](#) under EEG Settings for instructions on how to create and edit your own perspectives.



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) to appear on the same graph. Click the Add Trace button to hide the popup temporarily while you select the next channel. 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:

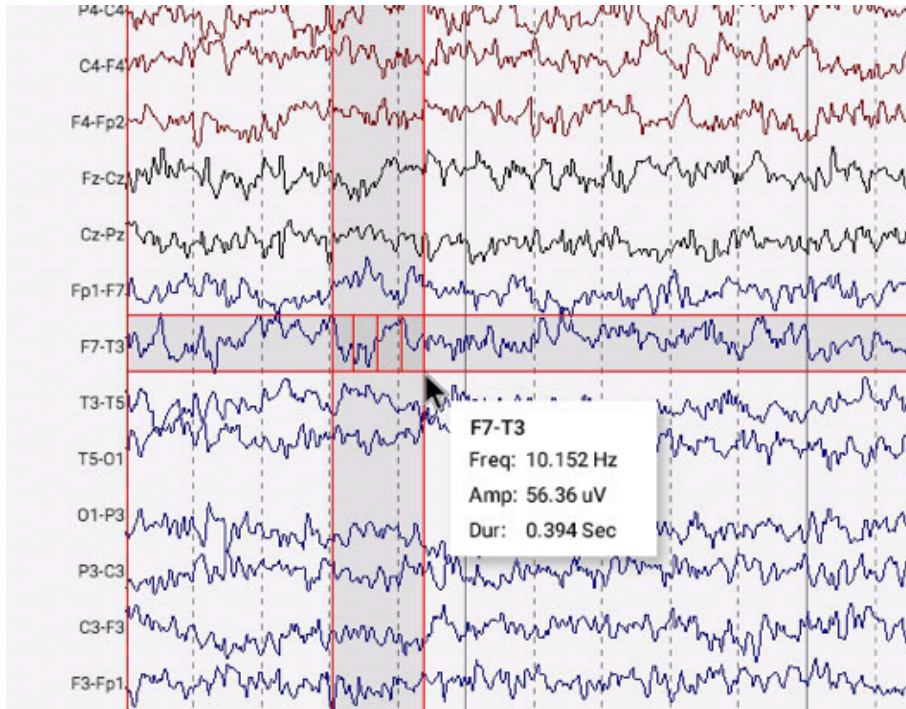
- Delta: 0.5–4 Hz
- Theta: 4–8 Hz
- Alpha: 8–13 Hz
- Beta: 13–30 Hz
- Gamma: 30–100 Hz



Frequency Cursor: Press this button to activate a cursor to do a quick, rough measurement. Click the screen and drag with the mouse over the section of a trace or traces you want to measure. Red guidelines help you see what section you have selected.

A popup window shows you the frequency, amplitude and duration. Frequency = 1/duration of the interval between the minor vertical lines. Amplitude = the distance between the horizontal lines scaled to the sensitivity of the channel being measured. Duration = duration from the start point to the current mouse point.

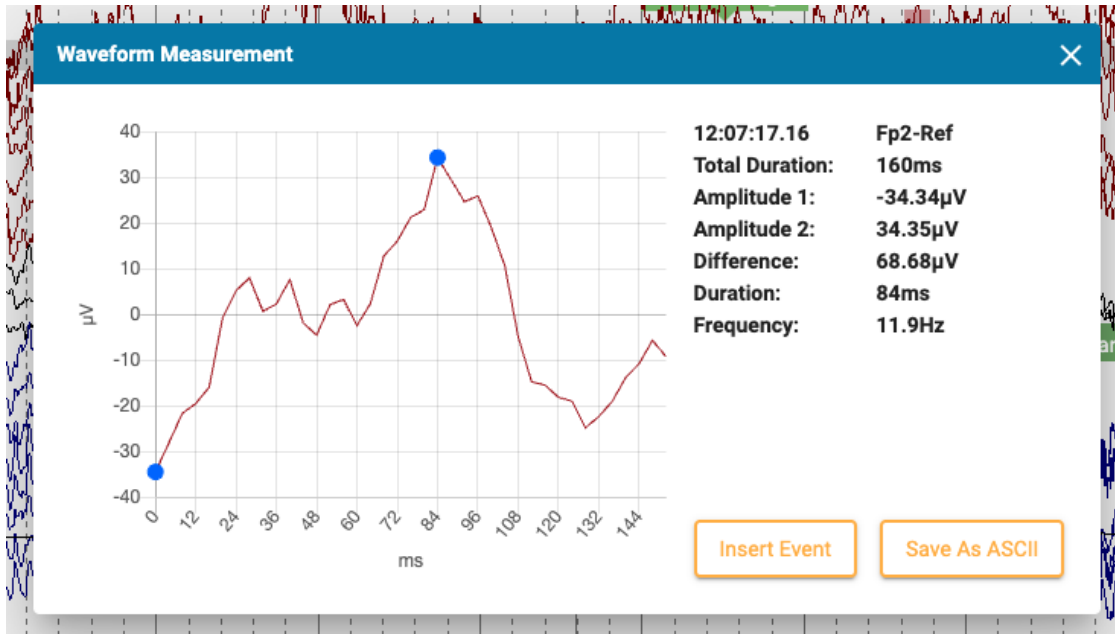
You can also activate the cursor by pressing the Shift key.



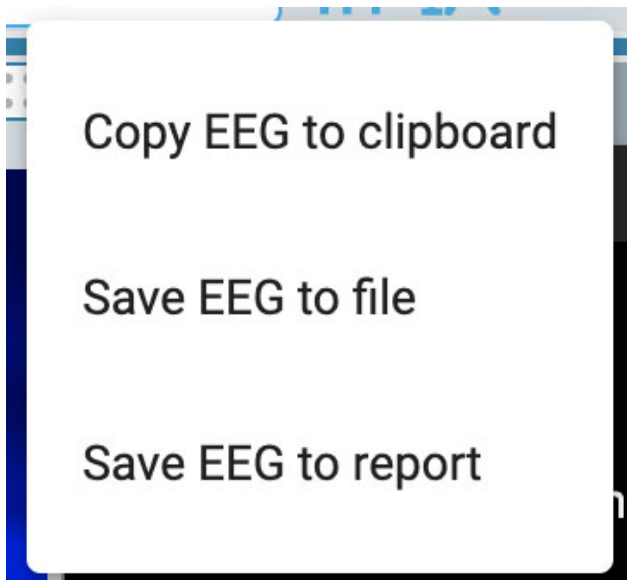
Waveform Measurement: The button shown above activates the Waveform Measurement Tool. This tool is used to measure the the difference between two amplitudes of a selected waveform.

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, and the frequency. 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
✕

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

Frequency: Left Hz Right Hz Symmetry

Amplitude: Left μ V Right μ V 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.

Ruler

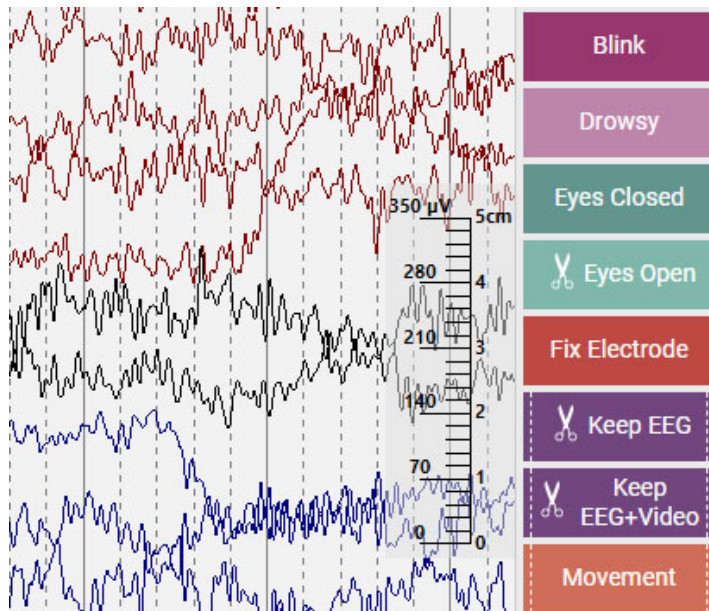


Hide or show the ruler by toggling the ruler button on the toolbar:

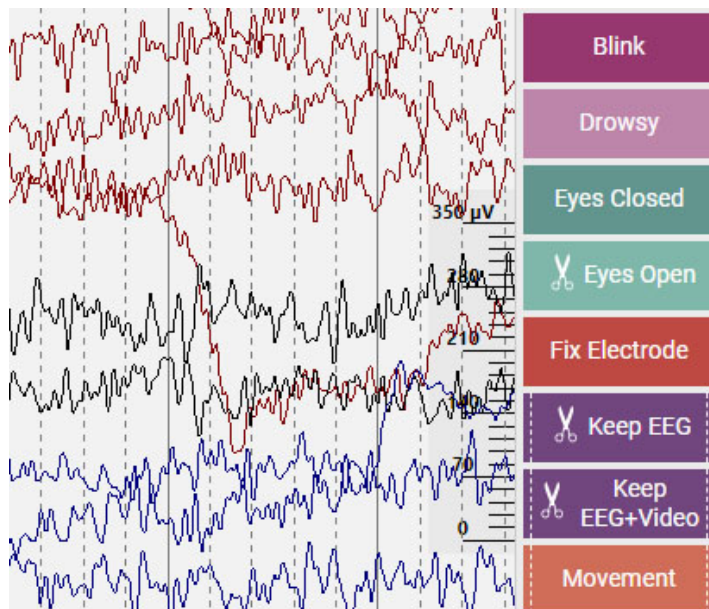
A transparent vertical ruler appears on the right side of the channel chart. This is to give a visual indication of amplitude. The screen needs to be calibrated each time an exam is opened on a new monitor for the ruler to show an accurate display of 5 centimeters. See the [Screen Calibration section](#)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



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.

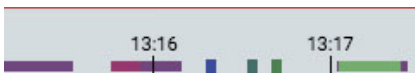
Current Page Marker

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.



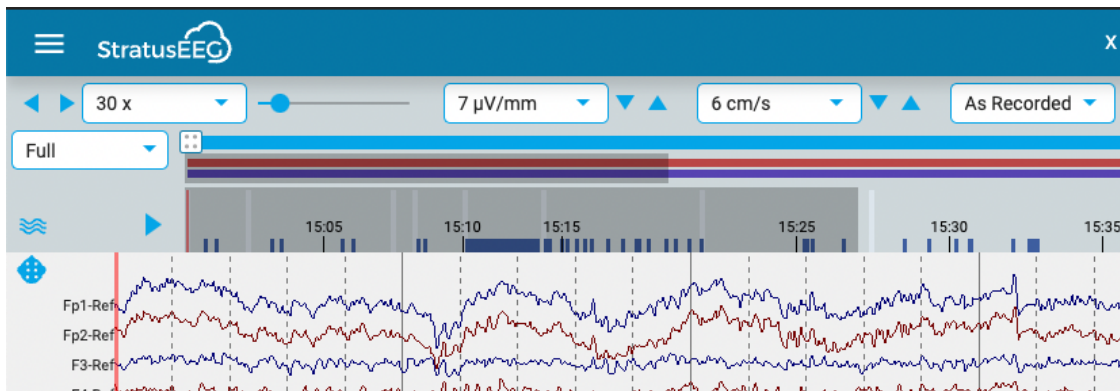
Video Overview

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.

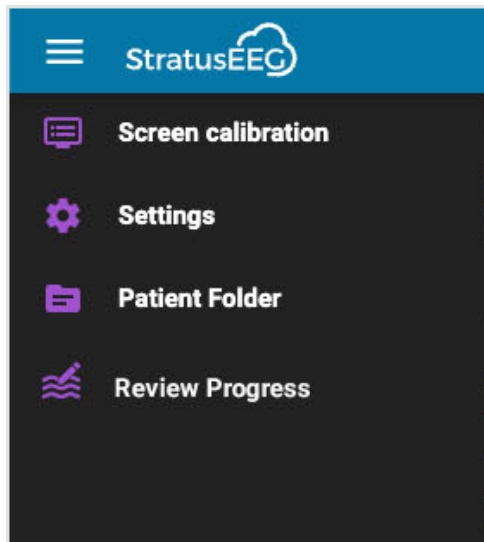


Review Progress

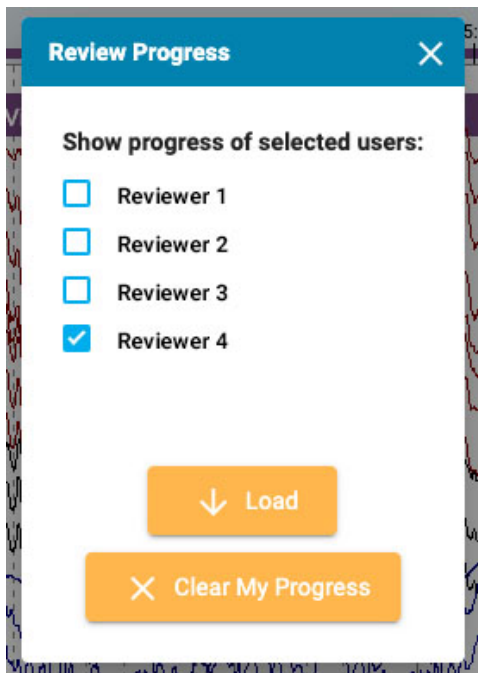
When reviewing long recordings, it can be helpful to keep track of which part of the EEG and video has already been reviewed. Reviewed sections will have a gray background on the timeline, and a separate gray background behind the video bar as shown:



Press the arrow button to the left of the overview to advance to the unreviewed section of the exam. To see what sections other reviewers have reviewed, choose Review Progress on the Review menu.

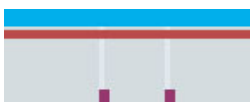


This opens a popup where you can select the users whose progress you want to view and press Load. You can also choose to clear your own progress by pressing that button.



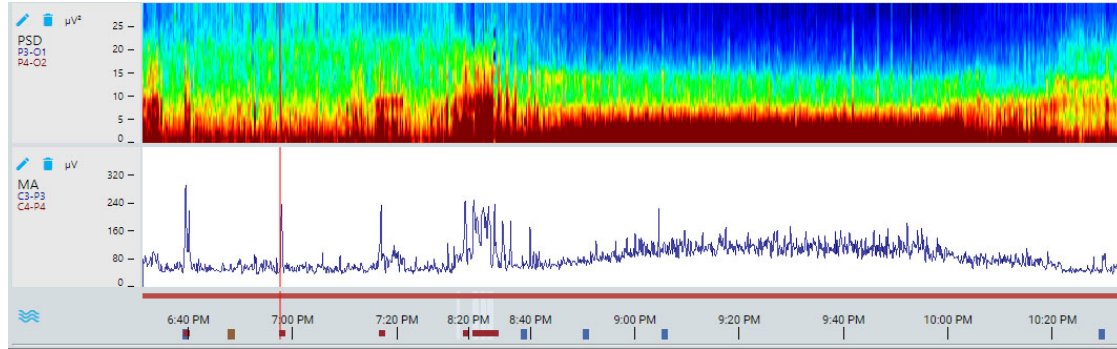
Segment Breaks

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.

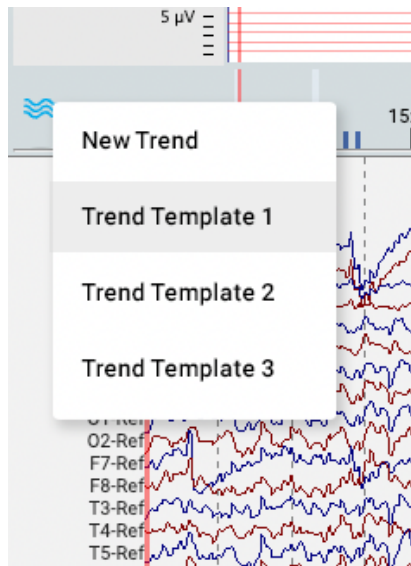


Trend Button

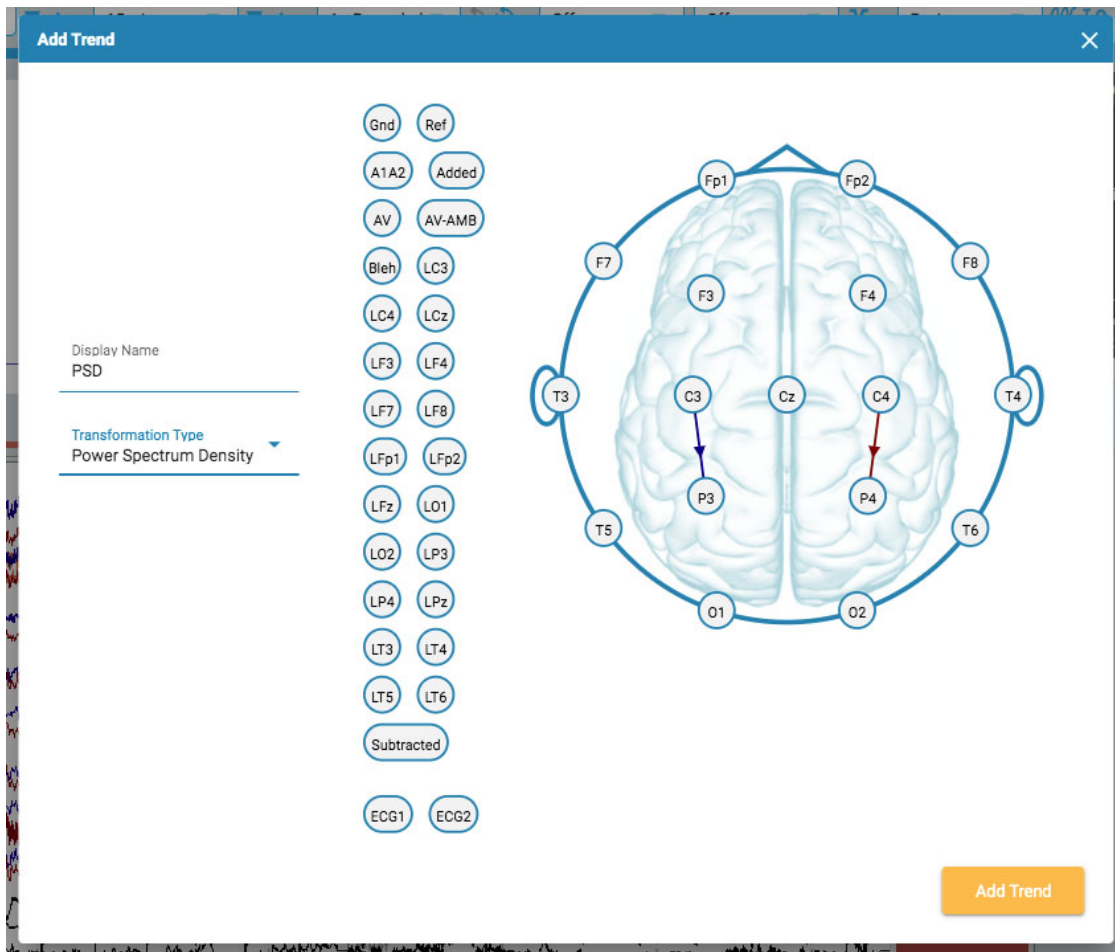
Press the Trend button to create a new trend, or to select a trend template, which a group of trends previously created in the EEG Settings.



To create a new trend, select that option from the popup:



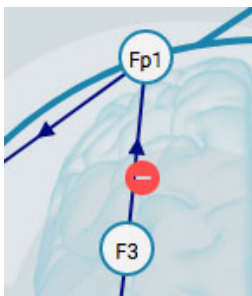
This opens the following dialog:



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

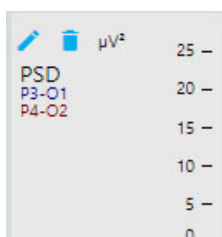
Select channels by clicking the electrode you want as the active channel, then on the one you want as reference. A line is drawn on the head between the two with an arrow indicating the direction. You can also use the electrodes shown to the left of the head. In this case, the arrow will not appear to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

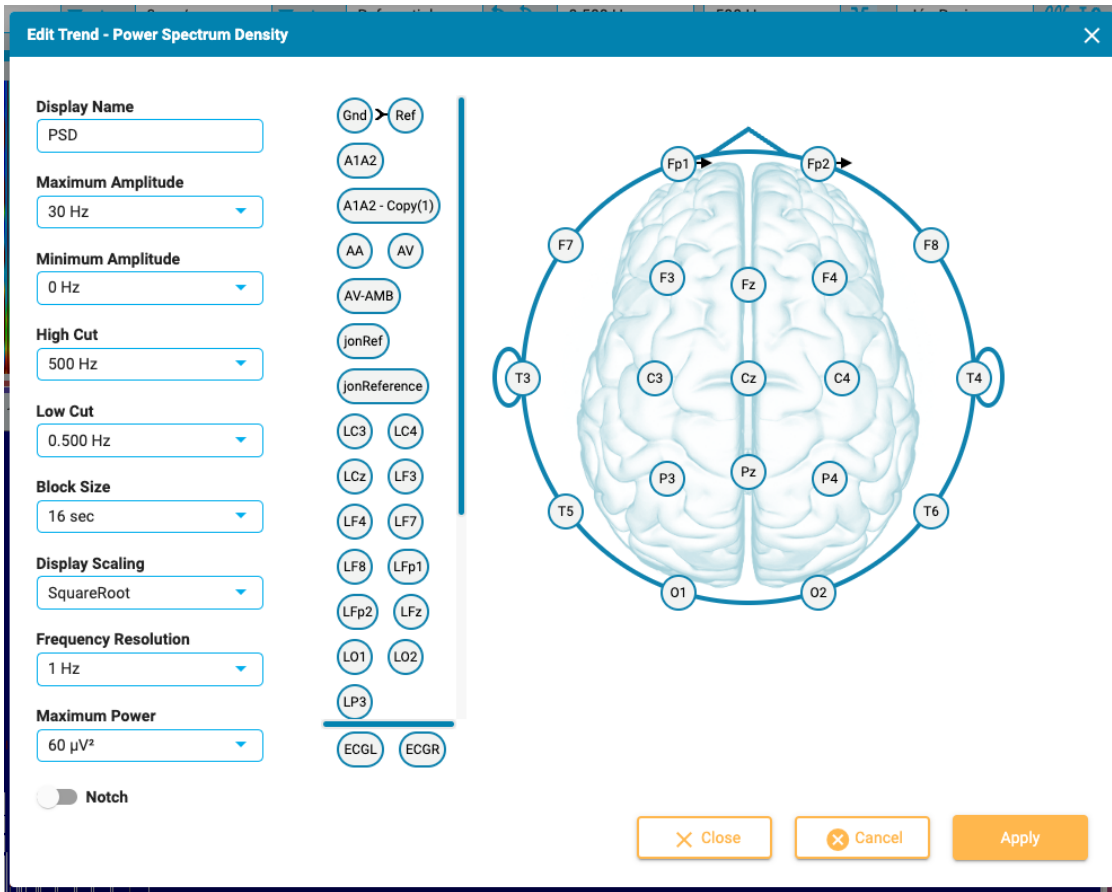


When you are finished, press Add Trend.

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.

Open Trends in New Window



A small popout button appears at the top right corner of the trend overview (to the right of the zoom bar). Press this button if you want to open trends in another browser tab which can be dragged to a 2nd monitor. This will allow more space for EEG traces on the original tab.

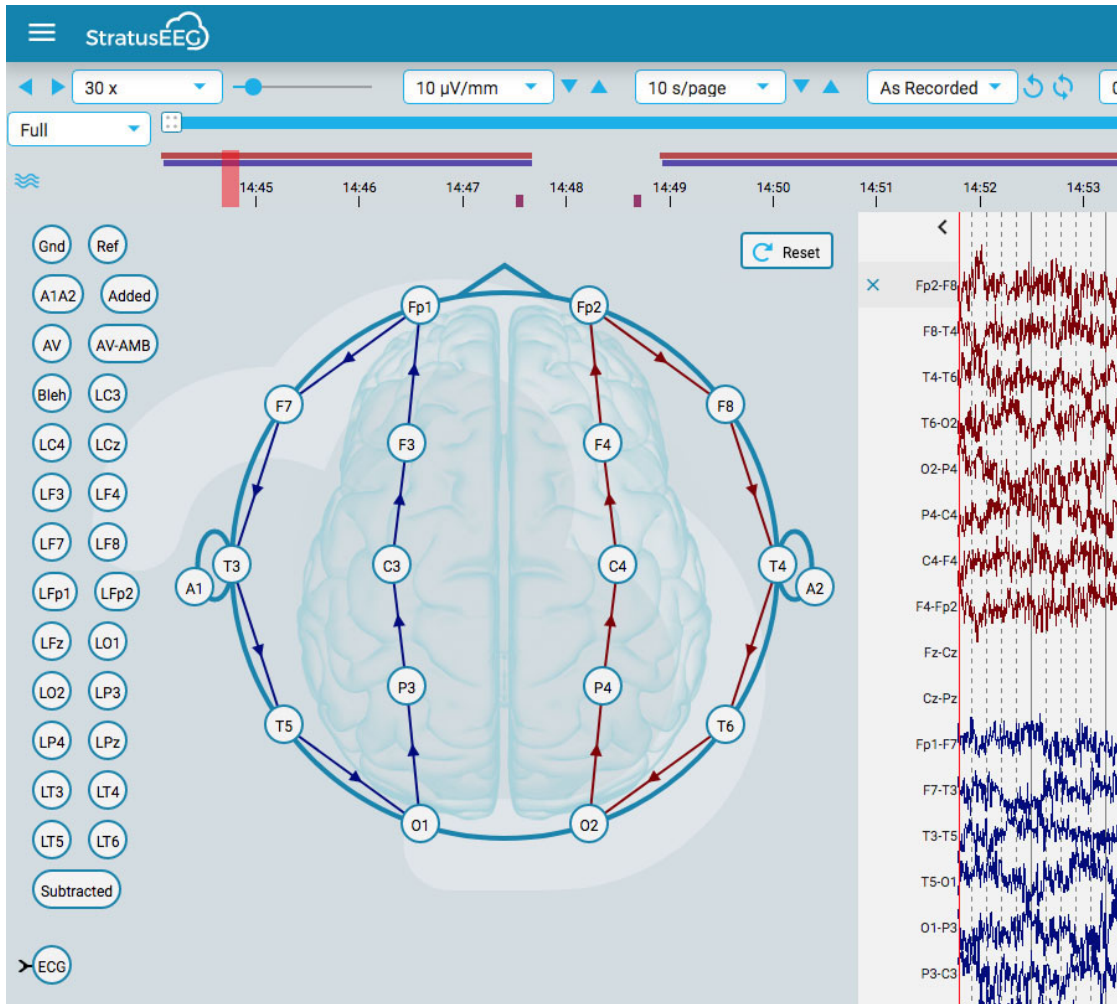
Channel Chart

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.



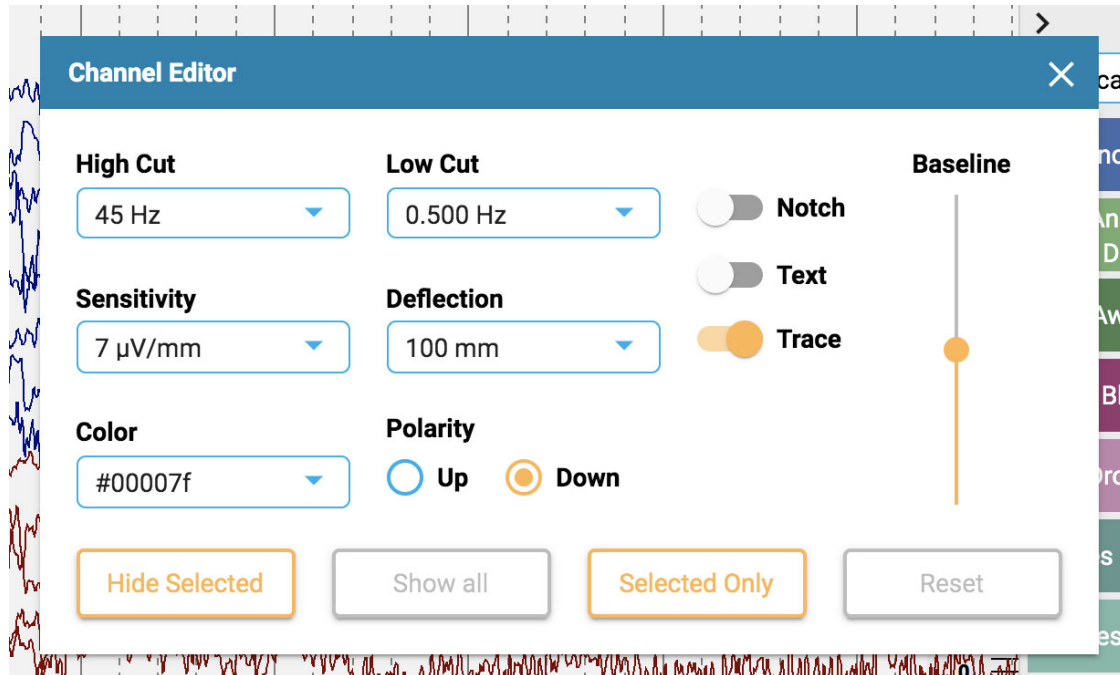
Channel Editor

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.

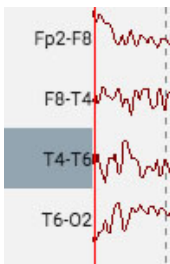


To open the Channel Editor, right-click on a channel label.



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.



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.

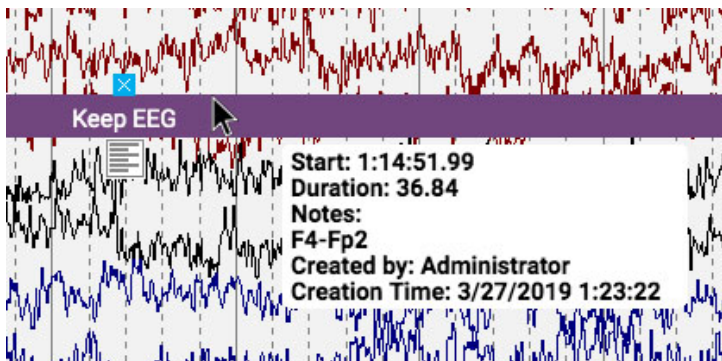
Alternatively, you can simply drag and drop any event on the screen.

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

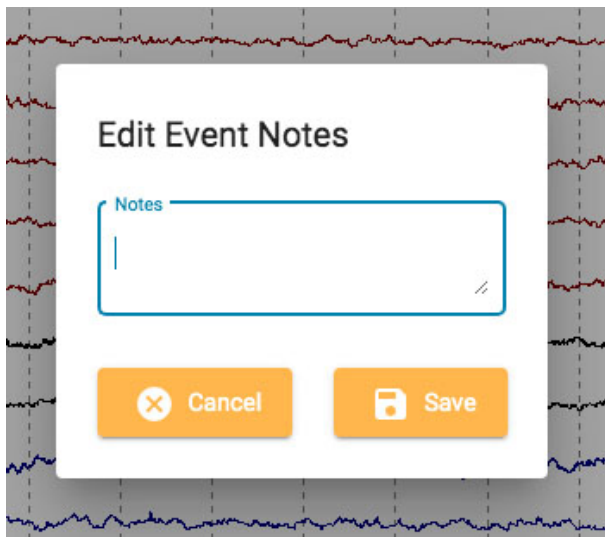
To place multiple instances of the same event, double-click the event marker first, and then you can insert an event marker onto the channel chart with each subsequent click, without having to go back to the event palette. Right-click on the channel chart to stop this action.

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.

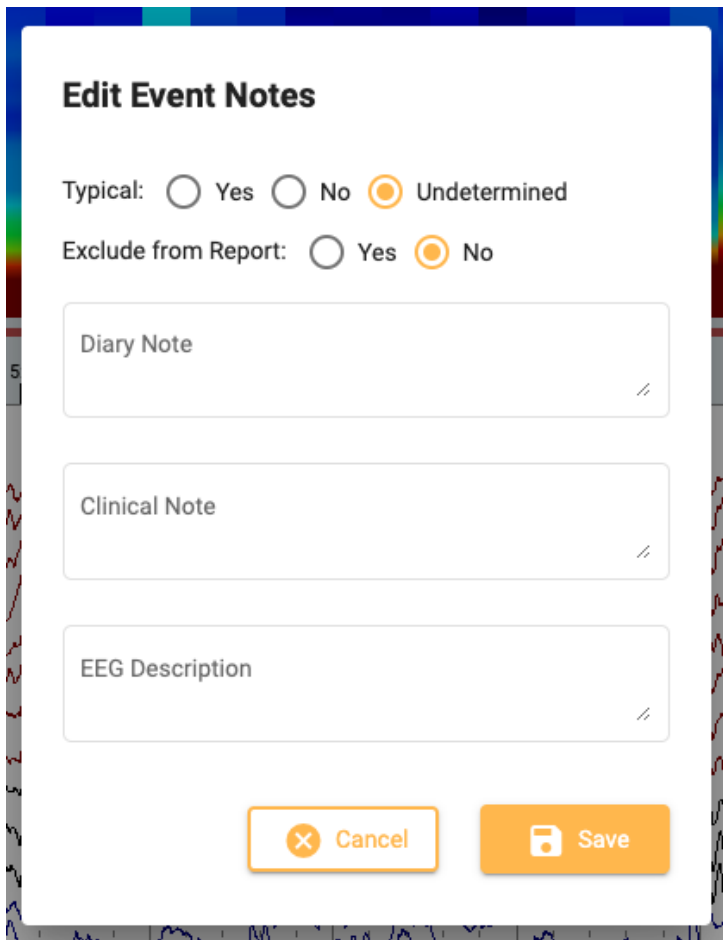


Edit Event Notes

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



If the event is a Report Event, there are some additional options on the popup:



Here you can add notes that will populate fields on the Report Events tab in the patient folder. You can also choose to exclude this instance of the event from the report.

Event Shortcut Keys

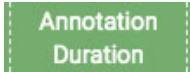
Instead of clicking on the event markers, you can also use the F-keys F1-F10, which correspond to the first 10 event markers on the event palette. Press the F-key then click the channel chart to place the event.

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.

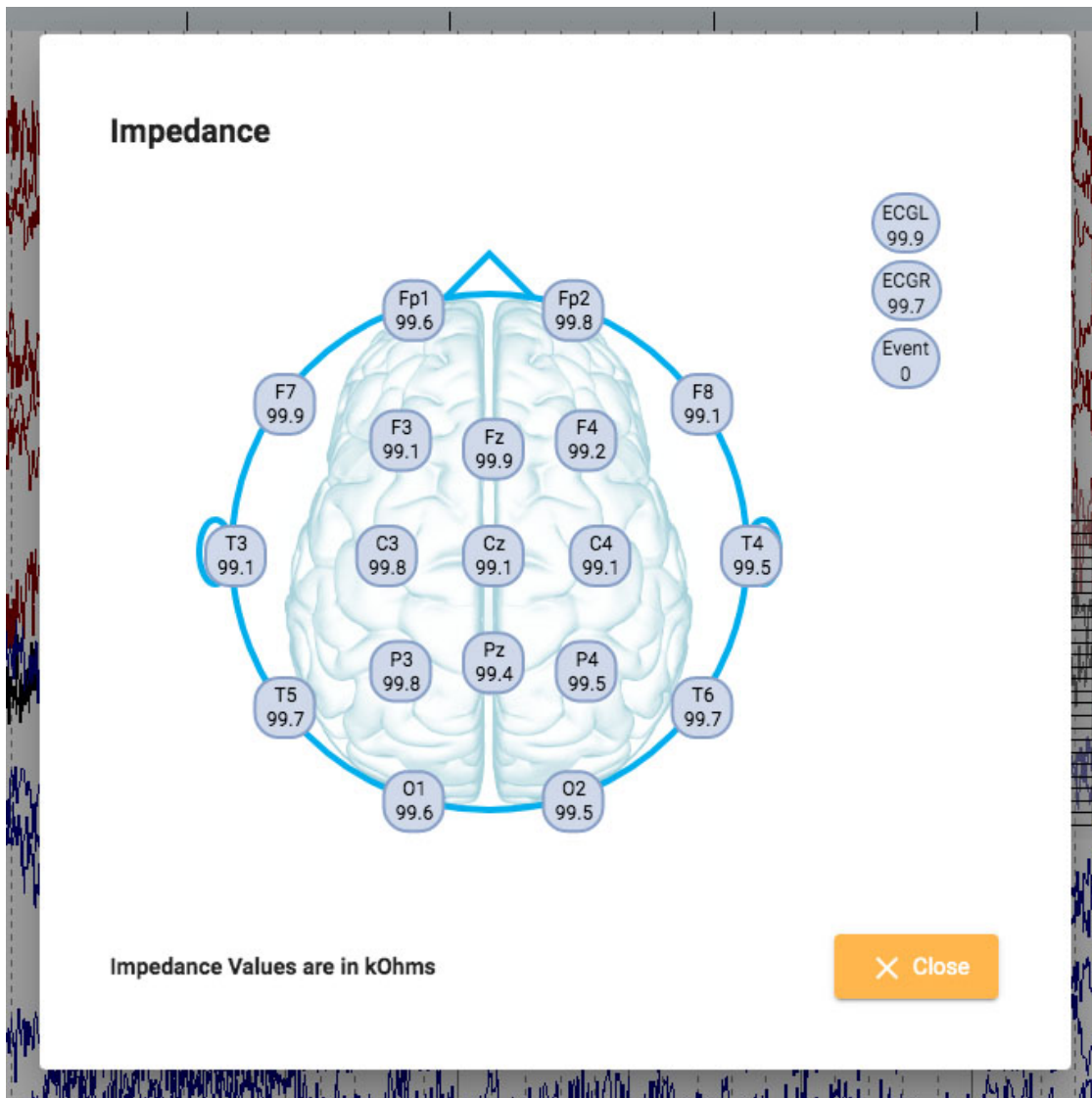


Impedance Events

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

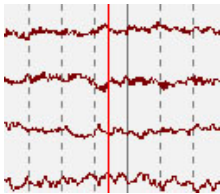


Play

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. To play the video forward or back at a slower speed, see the Step Buttons section below.

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. Press and hold the step buttons to play the video at a slower speed than the Play button. Optionally, hold the Alt button (Option on a Mac) and use either the right and left arrow keys or the mouse wheel to perform the same function.

Volume Control

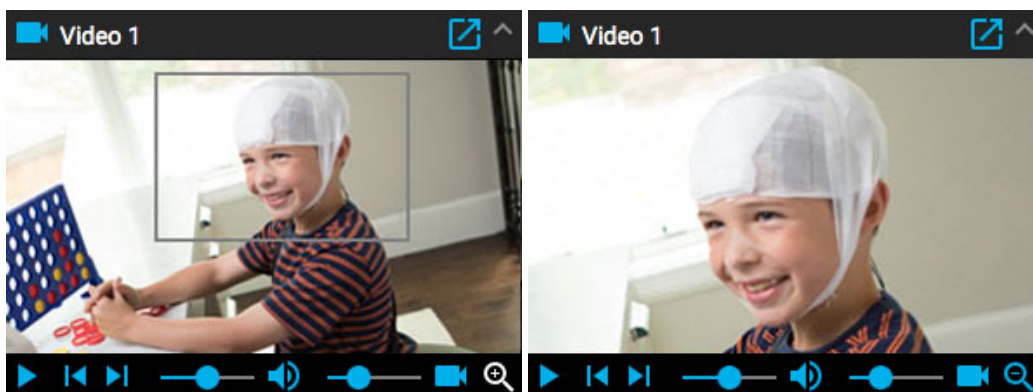
Use the volume slider to adjust the volume. Click the speaker icon to mute the sound completely.

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!



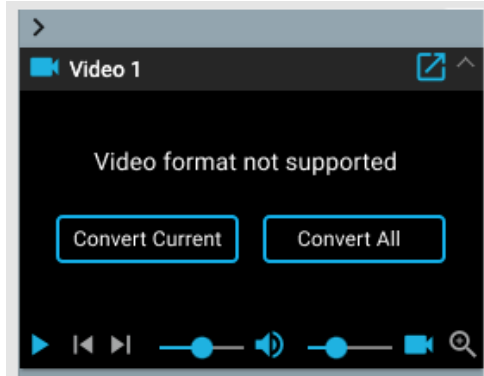
Open in New Window

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.



Other Video Formats

Some supported file formats may contain video that needs to be converted before viewing. When that is the case, you will see the following message and buttons:



Press Convert Video to convert the entire video. Since this can take some time, especially in long exams, you also have the option to Convert Current, which converts the current video segment. Progress of the conversion is shown at the bottom of the video panel, and also on the Tasks page.

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. Or page through the events on the event list by using the up/down arrows on the keyboard. Events on the page are highlighted on the event list.

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



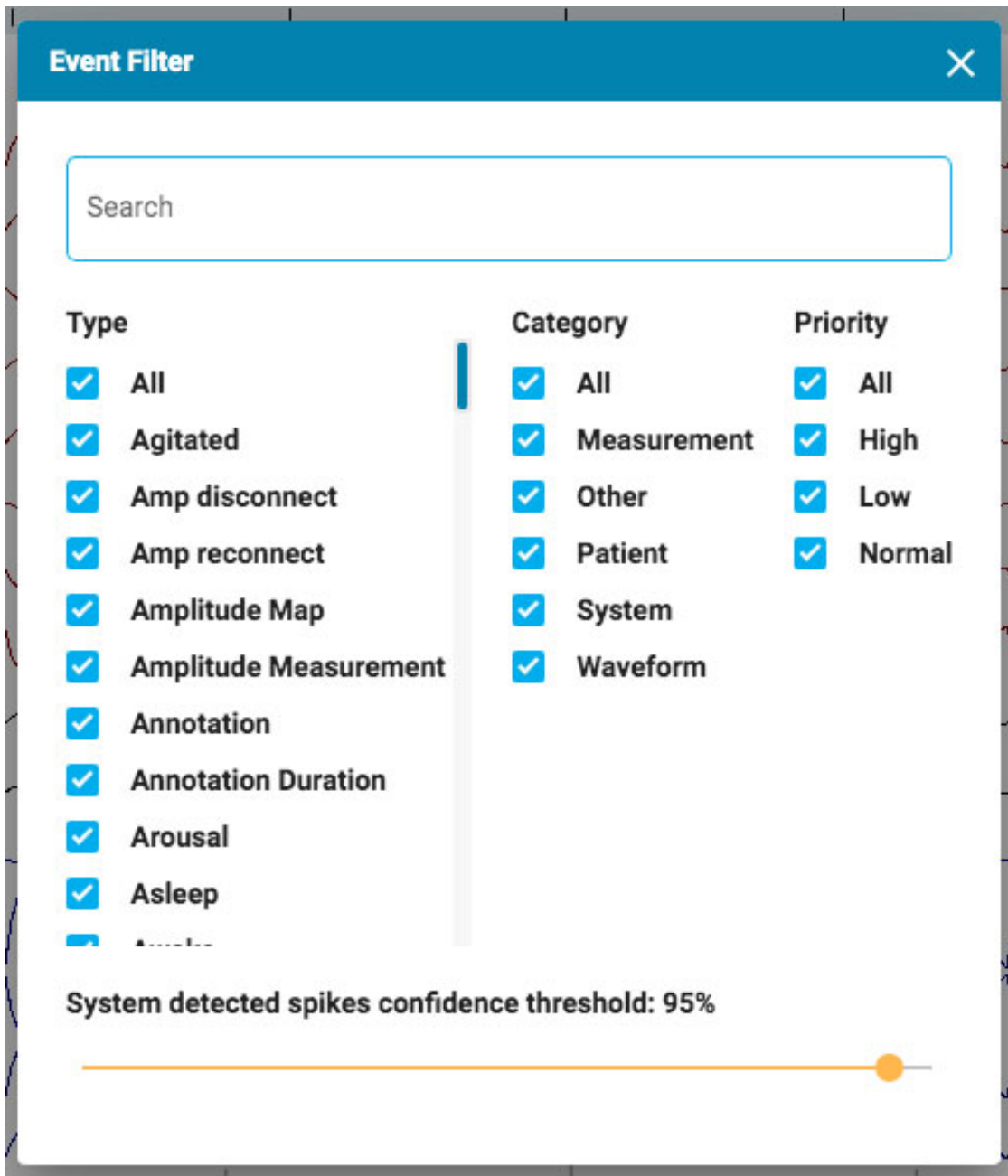
The buttons at the bottom of the event list perform the functions described below.



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

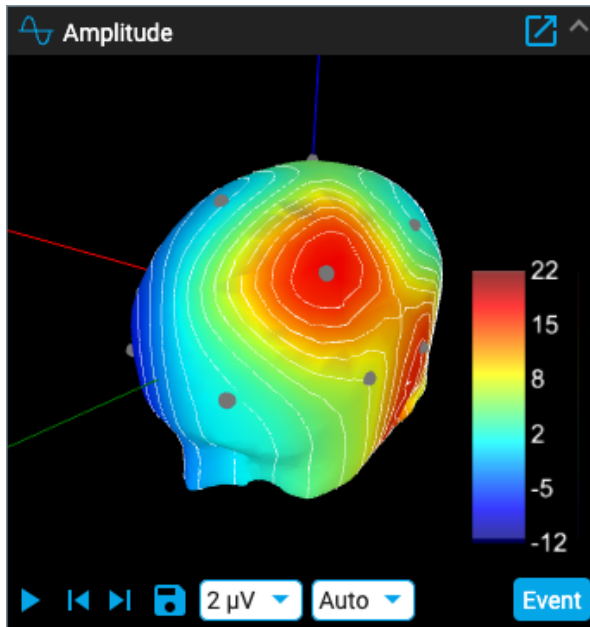
Copy all events in the list to the clipboard. You can then paste the list into a document, such as a Word document.

Delete

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

Amplitude Map

The Amplitude Map panel shows the amplitude of the EEG at the point of the red vertical cursor on the channel chart. Use the Play/Pause button, or the Step Left/Step Right buttons to move the cursor on the display. The red cursor can also be dragged manually to a specific point.

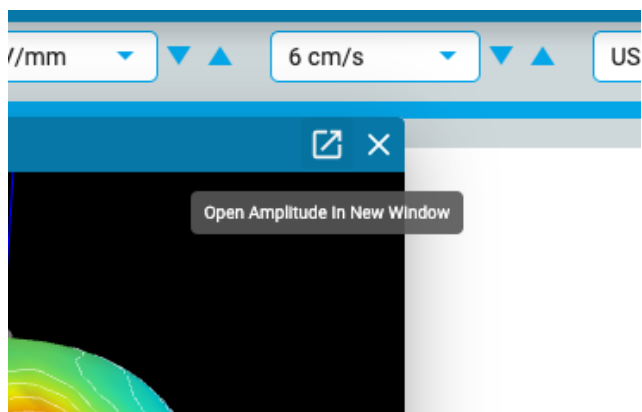


Press the Save icon to save a screenshot of the current position.

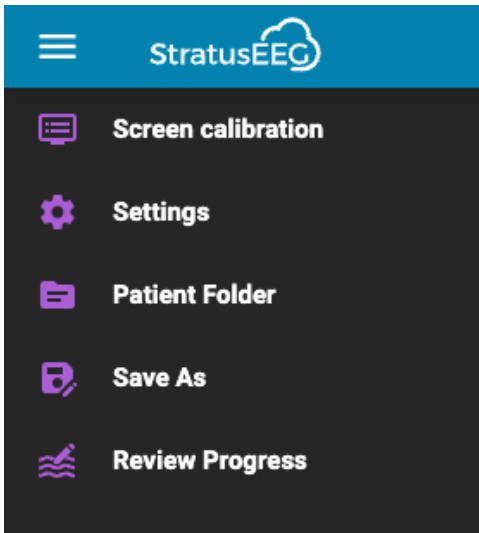
The Event button places an annotation event at the current point.

The first drop-down list changes the appearance of the ISO Electric Lines, or turns them off. The second drop-down list changes the Max Amplitude. Clicking or dragging on the panel changes the position of the head.

Click on the "popout" icon at the top left of the panel to pop it out to a resizable window. If you are using a 2nd monitor, click the same icon once more to pop out the panel into a new window that can then be dragged to the other screen.



Review Menu



Press the hamburger icon (3 horizontal bars) at the top left of the Review screen to reveal the review menu. Press a second time, or click elsewhere on the screen to close. Read on for a description of the options on this menu.

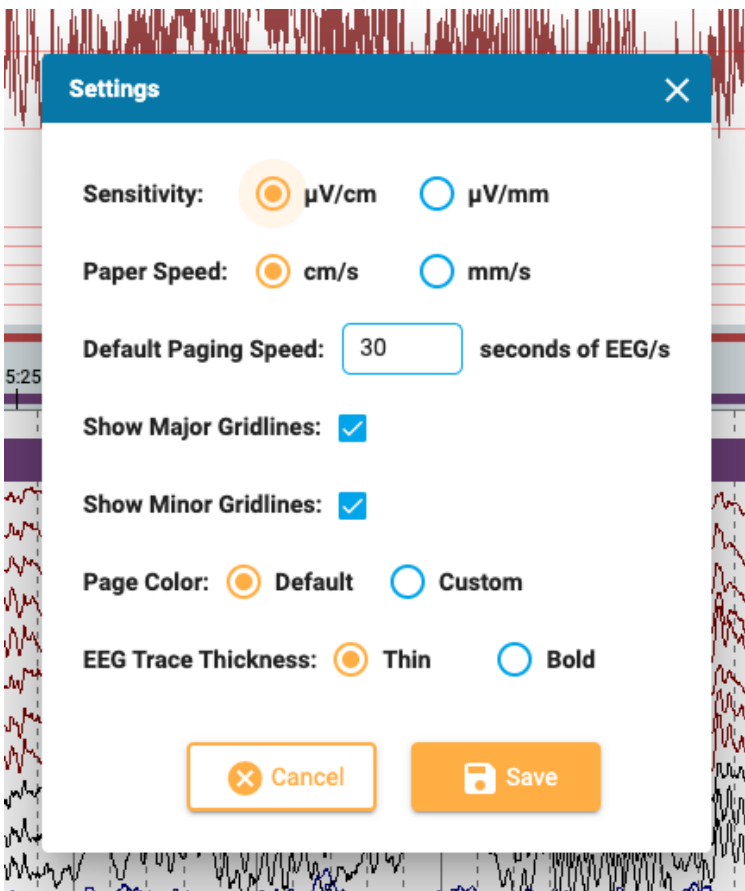
Screen Calibration

See the [screen calibration section](#) for an explanation of this tool. It is important to calibrate each new monitor before using Stratus EEG Review.

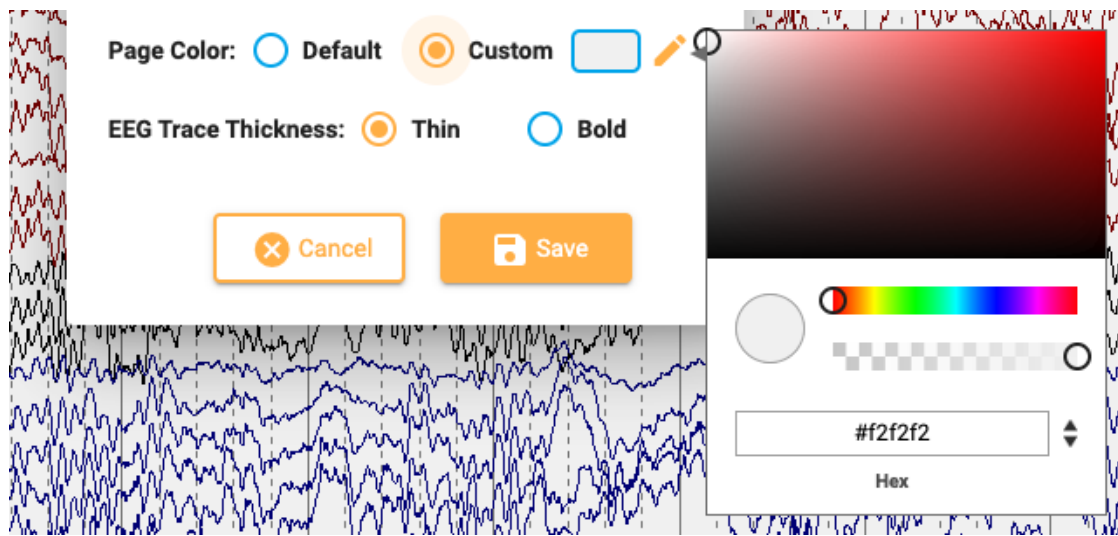
Settings

Choose this option 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, change the thickness of the EEG traces, 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.

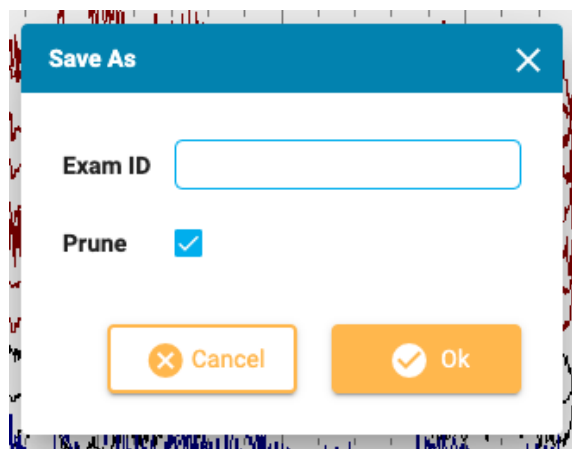


Patient Folder

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.

Save As



Choose Save As on the Review menu to save a copy of the exam to the patient folder. A popup appears where you can give the copy a new Exam ID. Check the Prune box to prune the copied exam. Follow the progress of the copying process on the Tasks page.

Review Progress

Select users on this popup to review their review progress on the overview. You can also choose to clear your own progress. See the [Review Progress](#) section above for more information about this feature.

