

New Mind Technologies Clinical Software Manual

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NewMind

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PART I - WELCOME

Dear NewMind Neurofeedback Training User:

Thank you for your interest in NewMind Technologies Clinical Neurofeedback Training Software. Please read through this manual carefully. Step-by-step instructions are covered in detail on the following pages. You are encouraged to review the entire manual before using the NewMind Trainer software.

These instructions cover both the NewMind Trainer 4 Channel amp and the NewMind Trainer 20 amp. As of this writing these amps are identical except for conducting a qEEG Brain Map. The NewMind Trainer 20 can conduct a full qEEG at all 19 sites in one run (at the same time) for both eyes closed and eyes open mapping.

This software is designed to be used with the NewMind Trainer 4 Channel Amp, and the NewMind Trainer 20 amp. The software is also compatible with the BrainMaster® Atlantis I four channel amp, the BrainMaster® Atlantis II two channel amp, the BrainMaster® Discovery I amp.

In this manual, you will find everything you need to successfully use the NewMind Trainers, clinical software, and related QEEG Brain Mapping services. As a guide, we use the following instructional highlights:

EMPHASIS will be in BOLD TEXT or BOLD ITALICS TEXT OPERATIONAL INSTRUCTIONS will be in GREEN TEXT NOTES and WARNINGS will be in RED TEXT.

CLINICIANS: If you are having problems with NewMind Clinical Software, as the registered owner you should be the person to contact NewMind Technologies for support. Please do NOT have technicians or other office staff persons call on your behalf.

Yours in Health,

The NewMind Technology Team

Please take time to view all of our training videos on YouTube. You can view our channel by clicking on the following link [NewMind Technologies YouTube Page](#). You can also go to www.youtube.com and search NewMind Technologies.

OVERVIEW

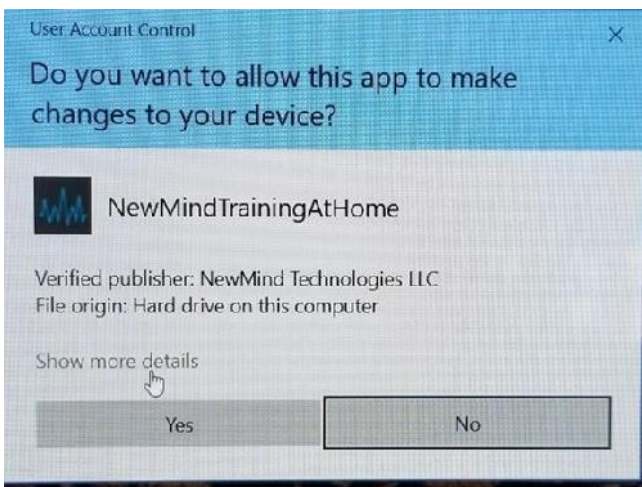
NewMind Technologies CLINICAL TRAINING Software

NOTE: Before downloading your NewMind Trainer Software make sure you have logged onto your Windows computer as an ADMINISTRATOR, otherwise your software will not download properly. This is especially true in Windows Ver. 8.1 and Windows 10.

When you download and install your NewMind software, each time you click on the *NewMind Training* icon on your computer desktop.



The following window will appear:

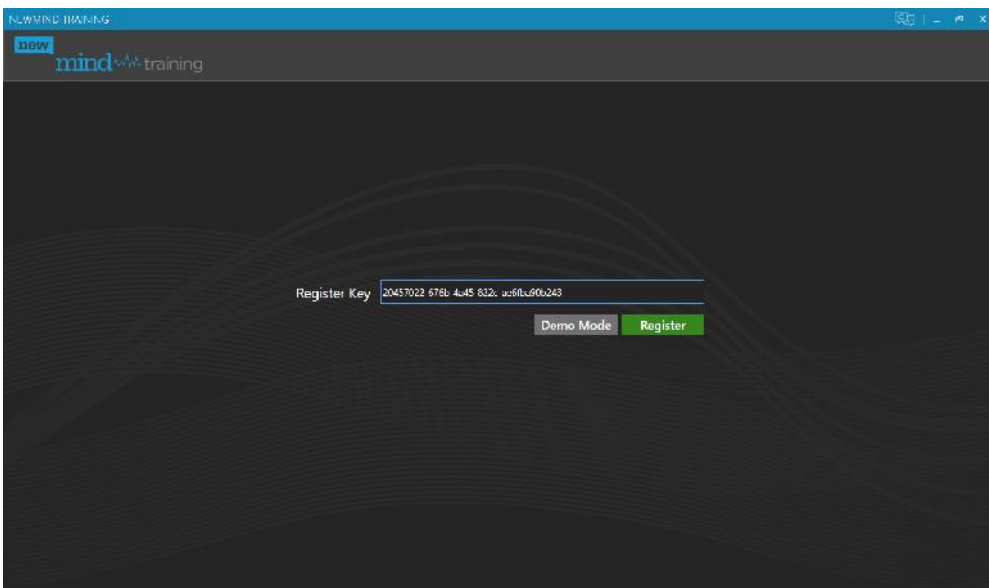
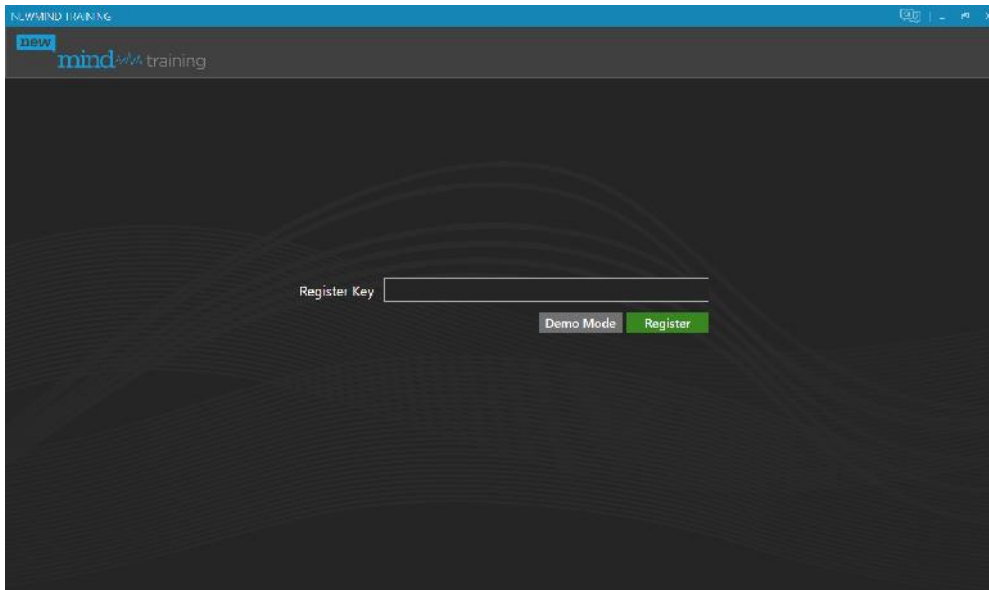


Click on Yes

Once your software has downloaded, click on the *NewMind Training* icon on your computer desktop.



If you are a new user, the first time you click on the icon you will need to **enter the software registration key issued to you by New Mind Technology.**



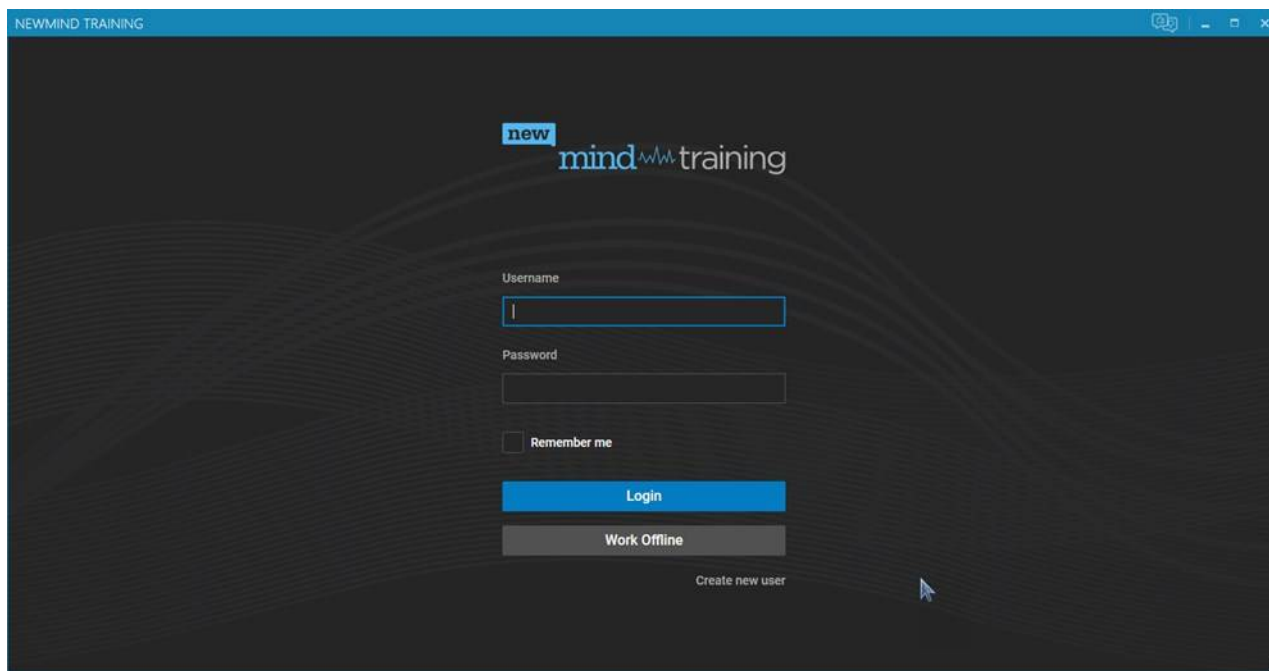
You will only need to enter the software key once.

Once you click on **Register** you will see the rotating dot of circles icon and if you successfully register your NewMind Trainer software, the NewMind Trainer dashboard will appear (see below).

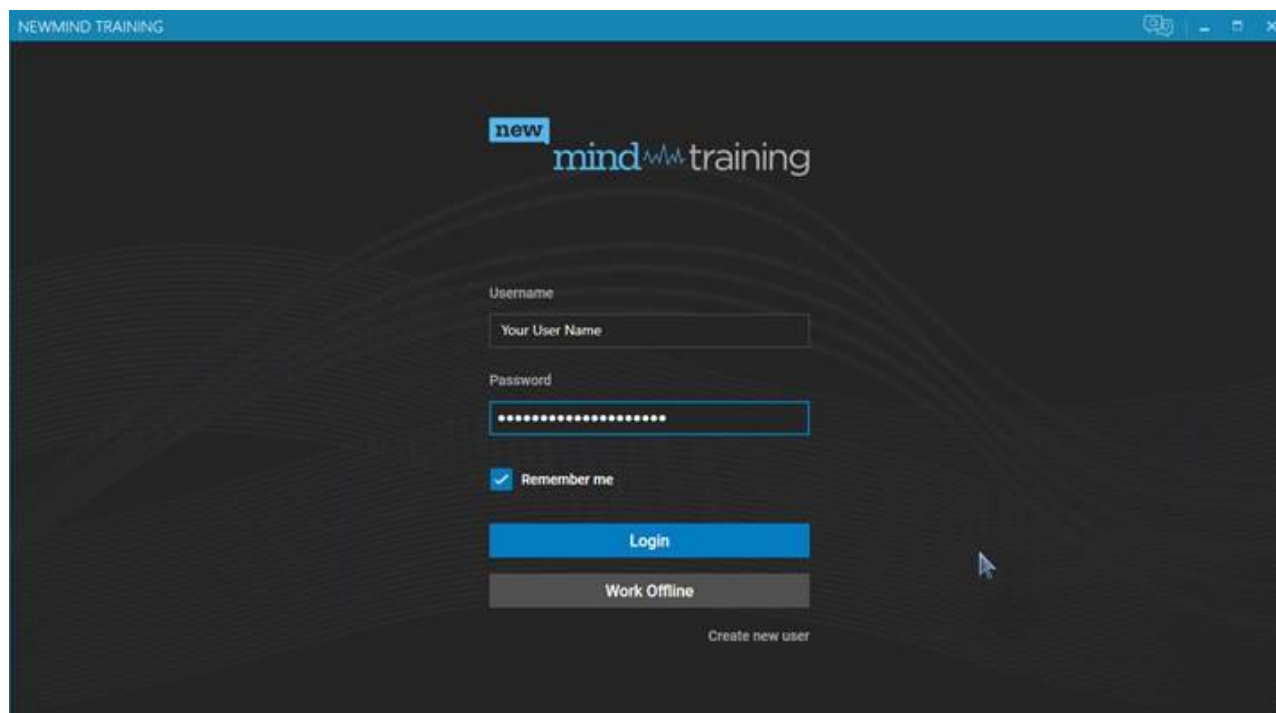
From then forward (after you have registered your software) when you click on the *NewMind Training* icon, you will see the software loading window.



After the software loads, you will have a choice to select *New Mind Training Offline* or *New Mind Training Online*. If you are not subscribed to *NewMind Basic software*, or *NewMind Pro software*, then click on *New Mind Offline*.



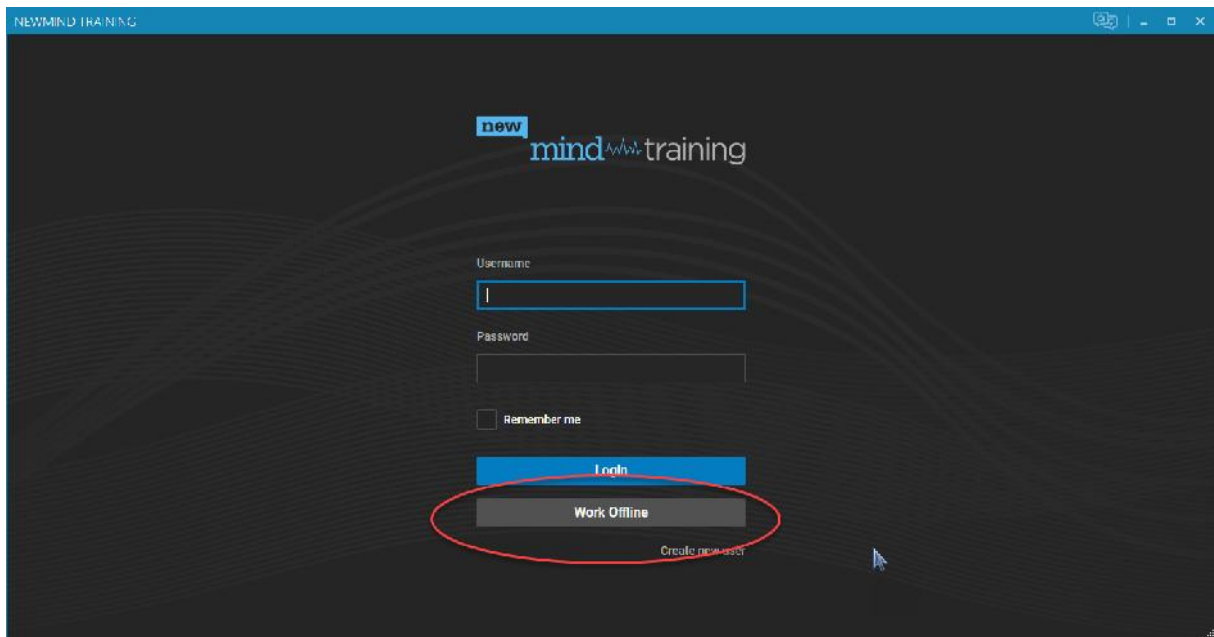
If you want to use the software in the online mode. **Enter your *NewMind Maps* account information and Click on Login.** Your username and password will be the same as the ones you use to log into www.newmindmaps.com.



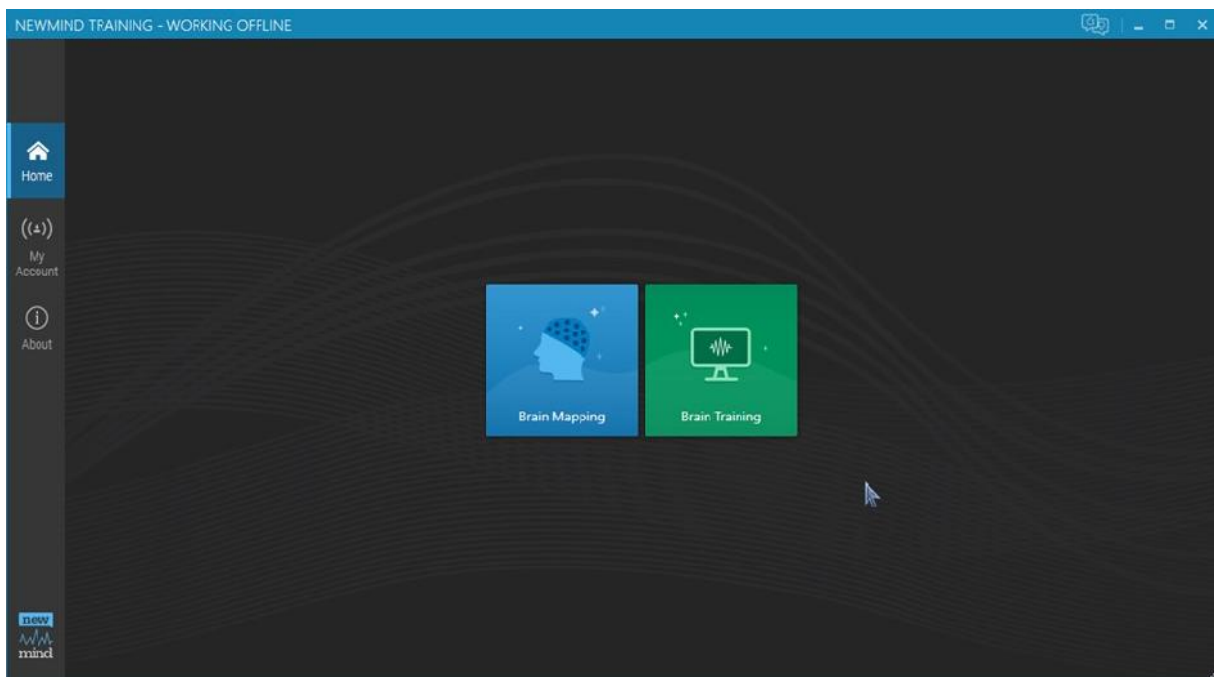
NOTE: If you check the “Remember me” box the software will memorize your *User Name* and *Password*, so you do not need to type it in each time you log on.

NewMind Training Offline

When you **Click on NewMind Training Offline**,

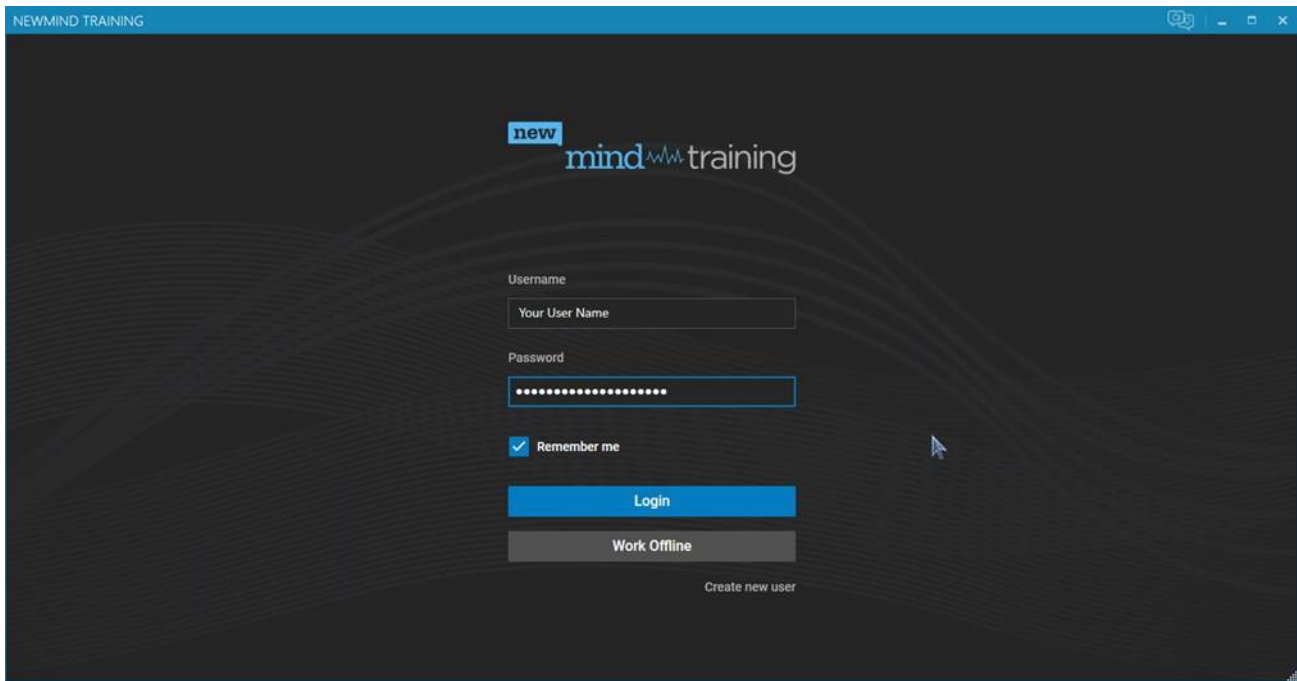


The *HOME* screen appears.

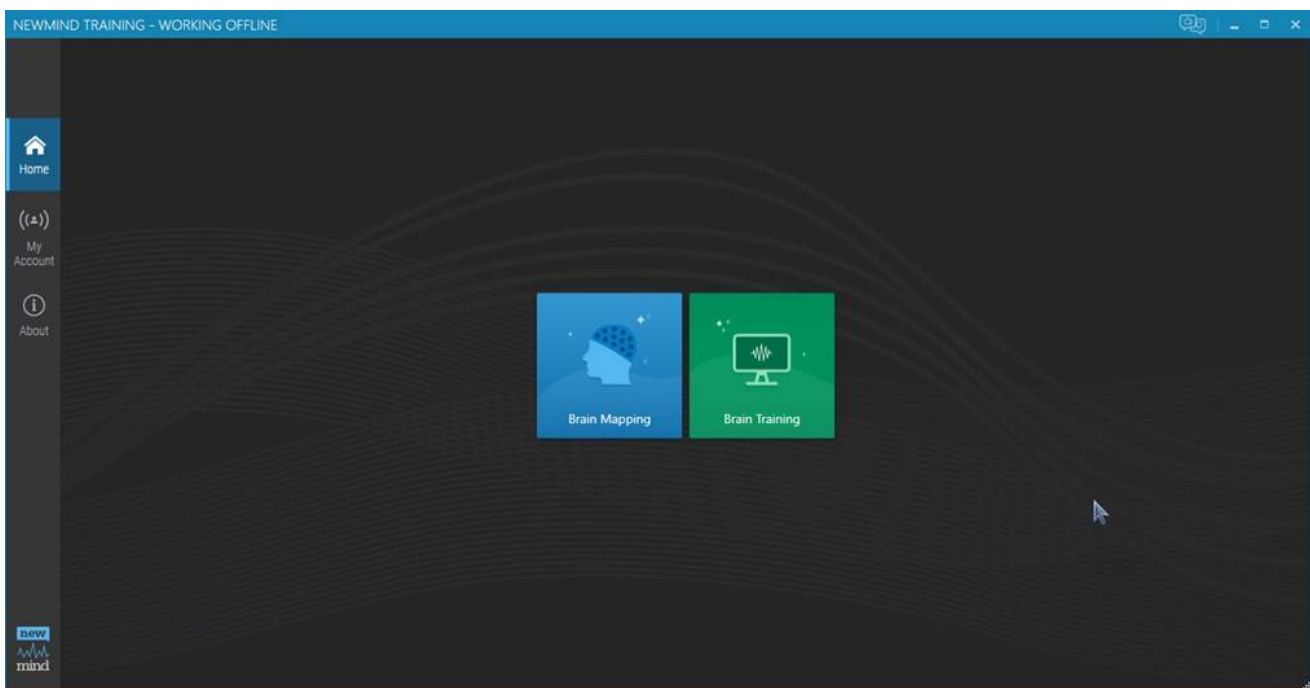


NewMind Training Online

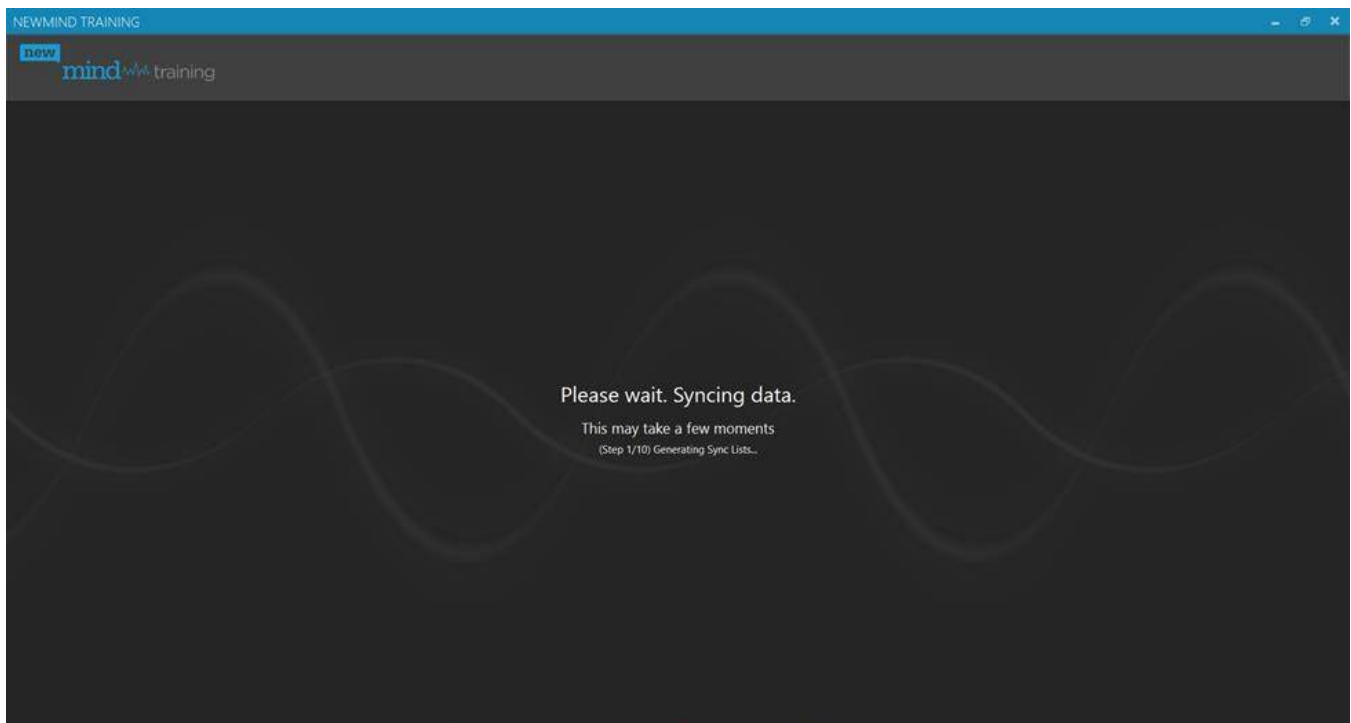
Enter your username and password (check the remember me box) [Click on Login:](#)



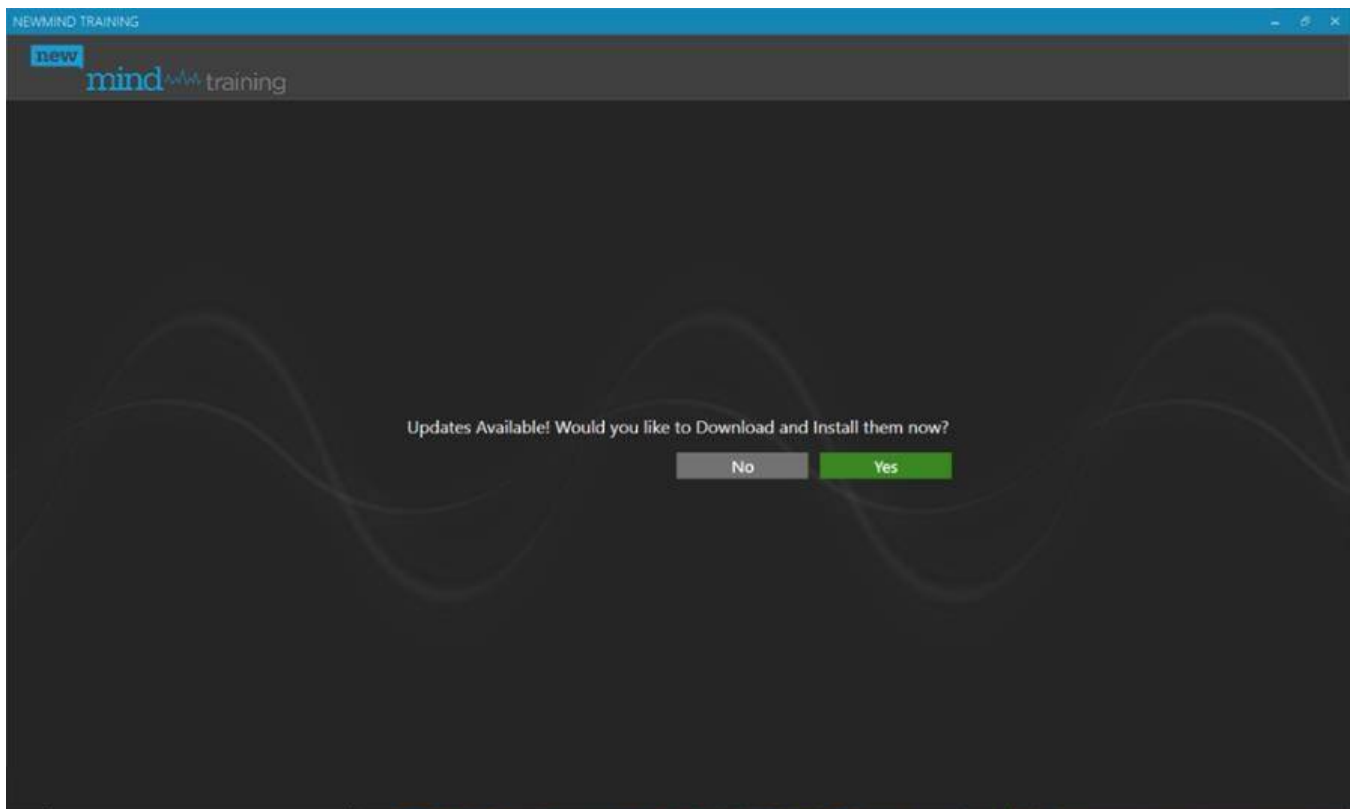
The following screen appears.



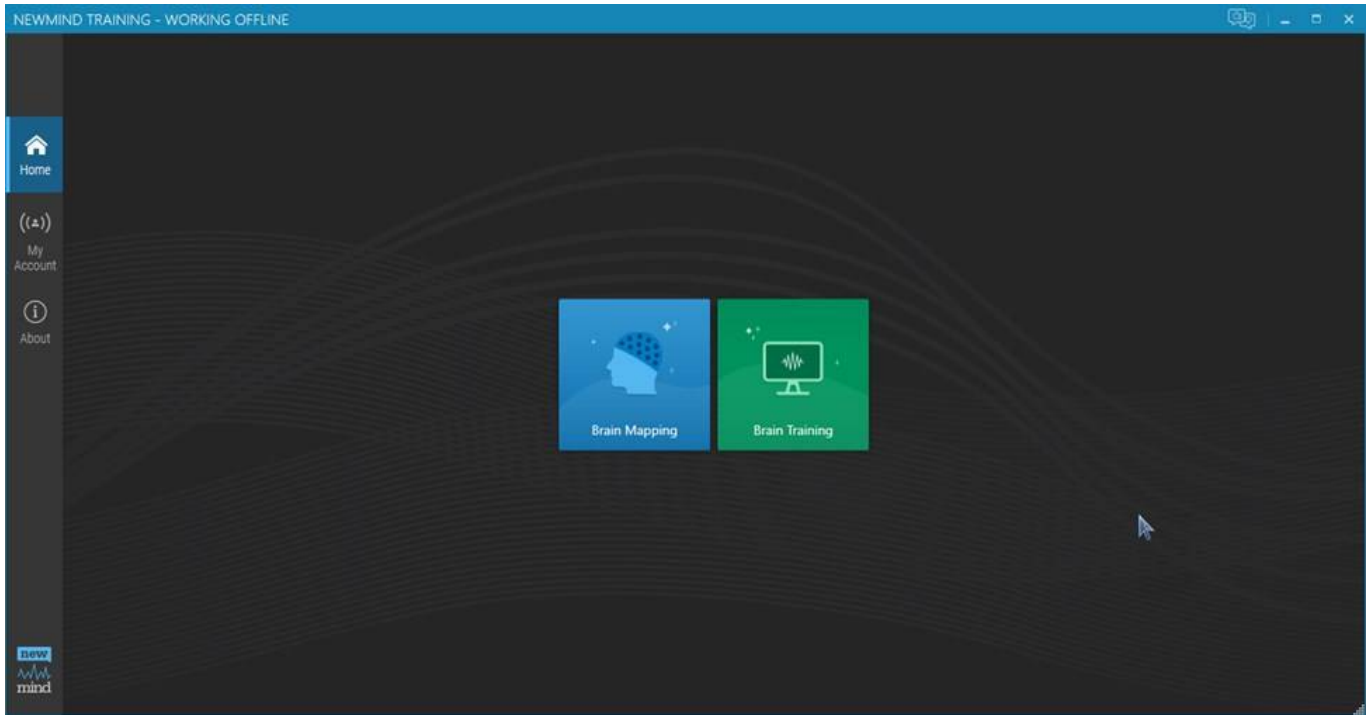
Then this screen appears:



NOTE: On occasion there will be software updates. When this occurs when you load the software you will get the following screen. Click on **Yes**

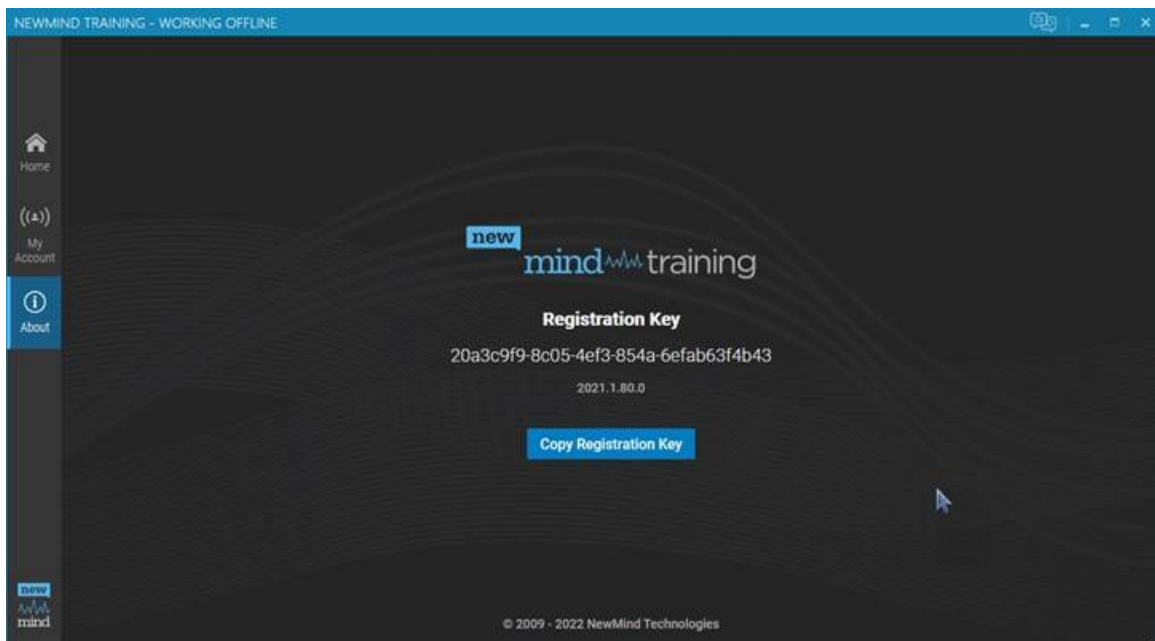


The HOME Screen



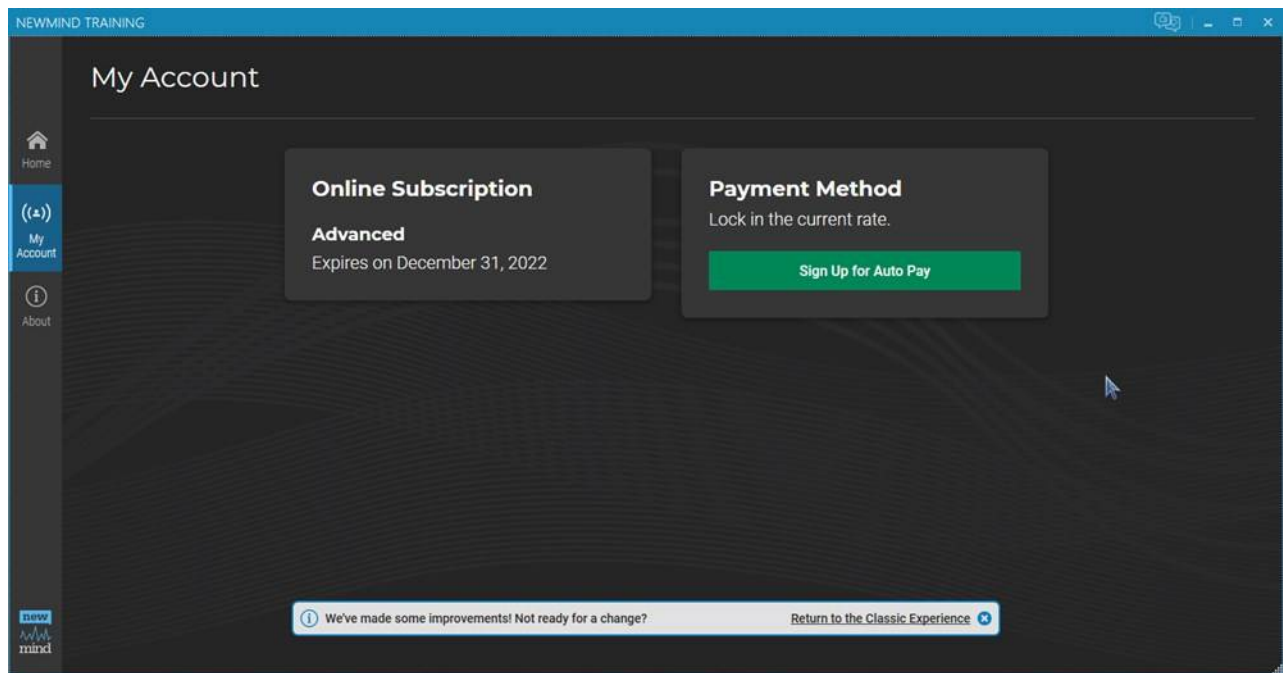
On the HOME screen select **“Brain Mapping”** if you are going to do a Brain Map or **“Brain Training”** if you are going to do Neurofeedback training. Then follow the instructions as outlined in this manual. Always make sure your New Mind Trainer is plugged into your computer before you start, or the software will default to **“Simulation Mode”**.

When you click on **About** you will see a screen that has your software key and the **Current Version** of New Mind Training Software. **Click on Home to exit this window.**

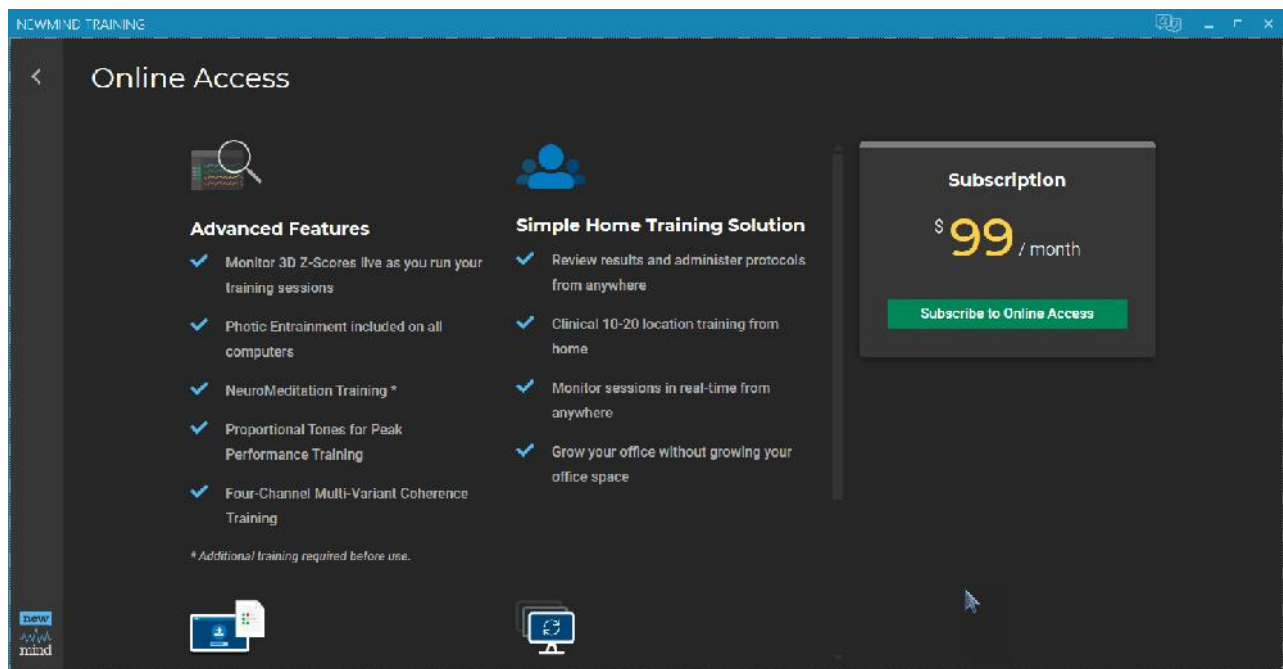


When you click on *About...*

This screen appears and shows your subscription and expiration date, and how to renew your subscription. **Click on Home to exit this window.**



If you click on the “Sign Up for Auto Pay” button You will receive an explanation of the Pro and Basic subscriptions. This will also allow you set up your auto payment method as well as change to a different credit card if you already have an existing subscription.

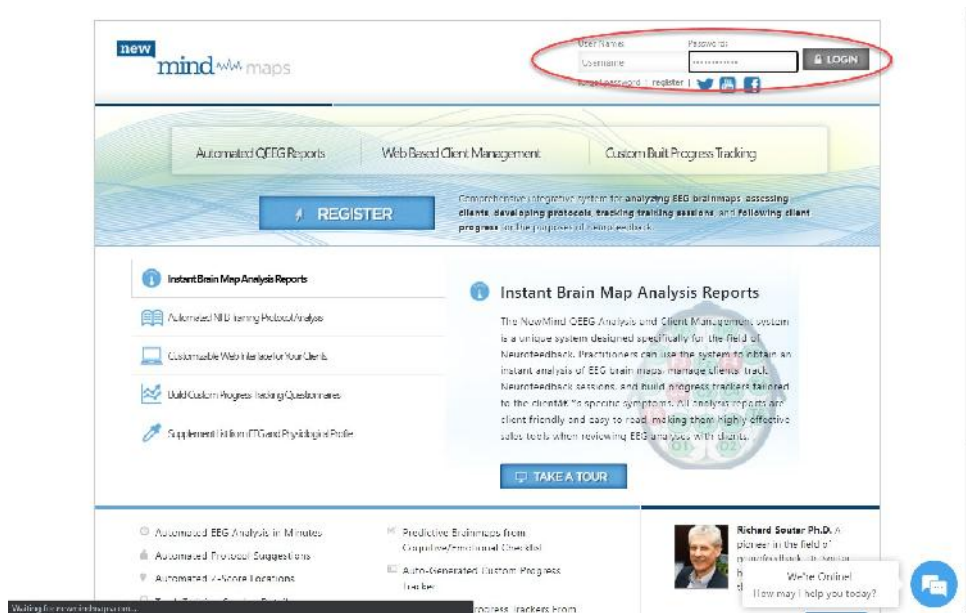


Part II: Conducting a QEEG Brain Map— Adding a Client to the Database

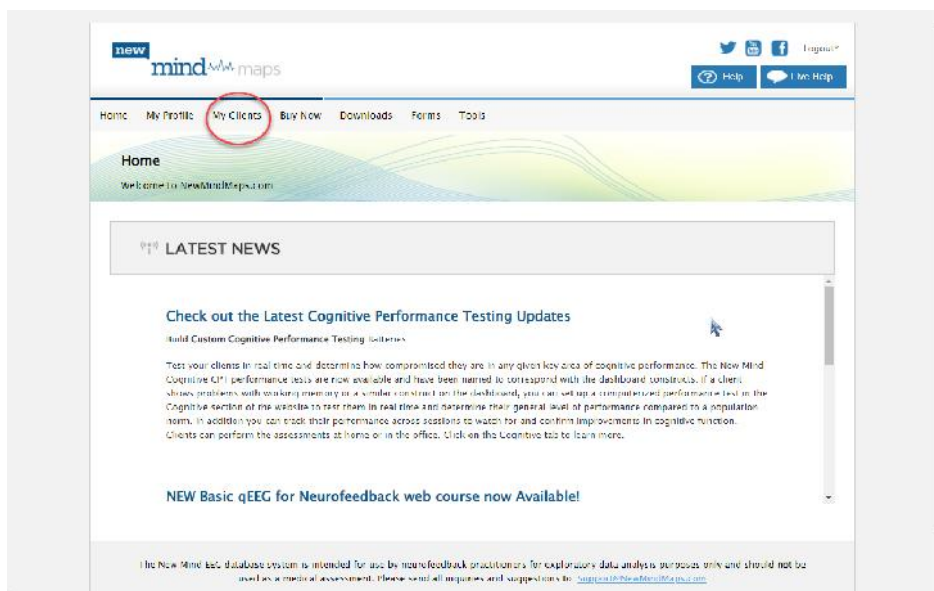
If you have a *Pro* online subscription you will need to add your client to your NewMindMaps account prior to opening your clinical software. If you are using an *Offline* account you can perform these steps after you have recorded their qEEG.

Navigate to www.newmindmaps.com and enter your username and password. Then click on the **Login** button.

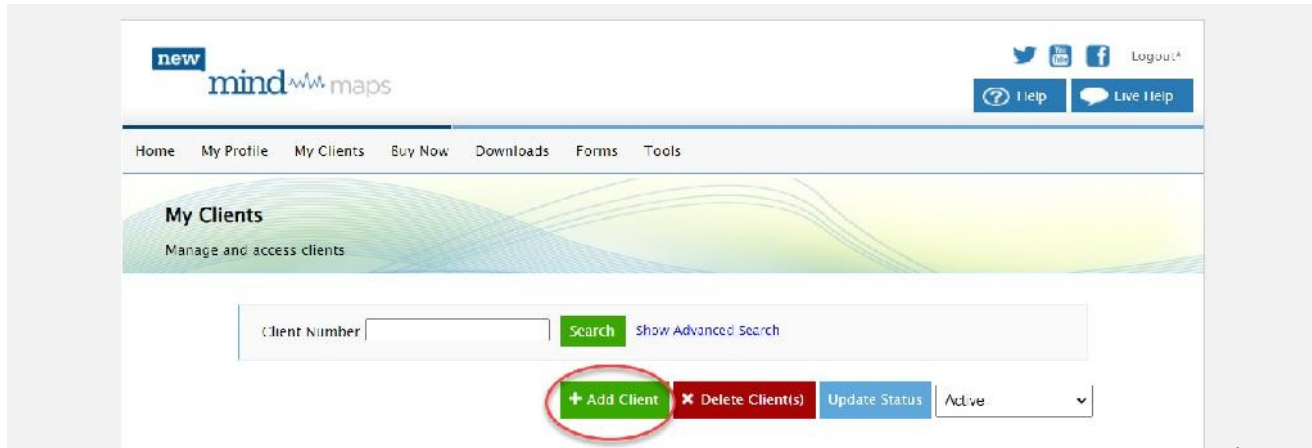
NOTE: Please be sure that your NewMind Clinical software is closed prior to performing the next steps



After logging into your account click on the “**My Clients**” tab

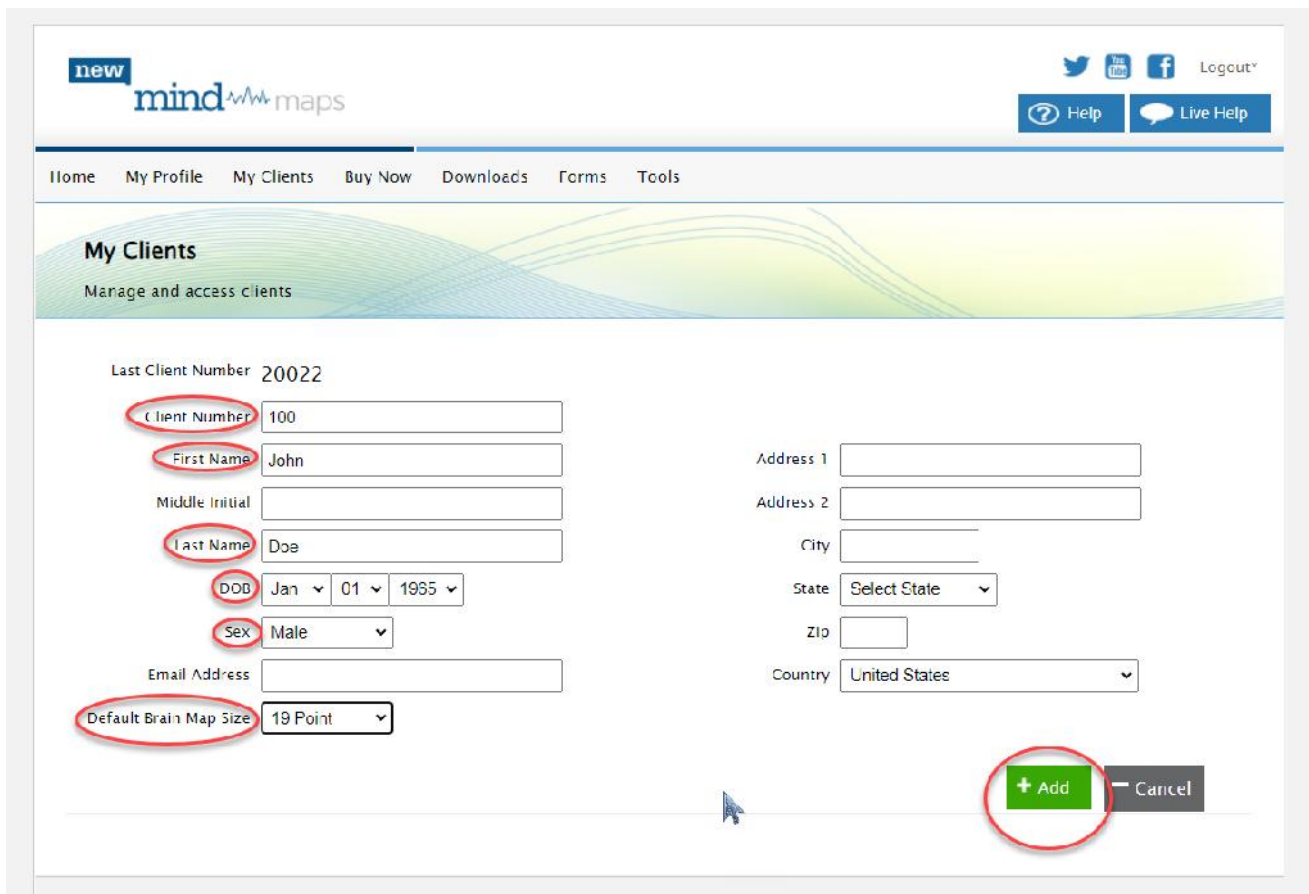


Click on the *Add Client* button



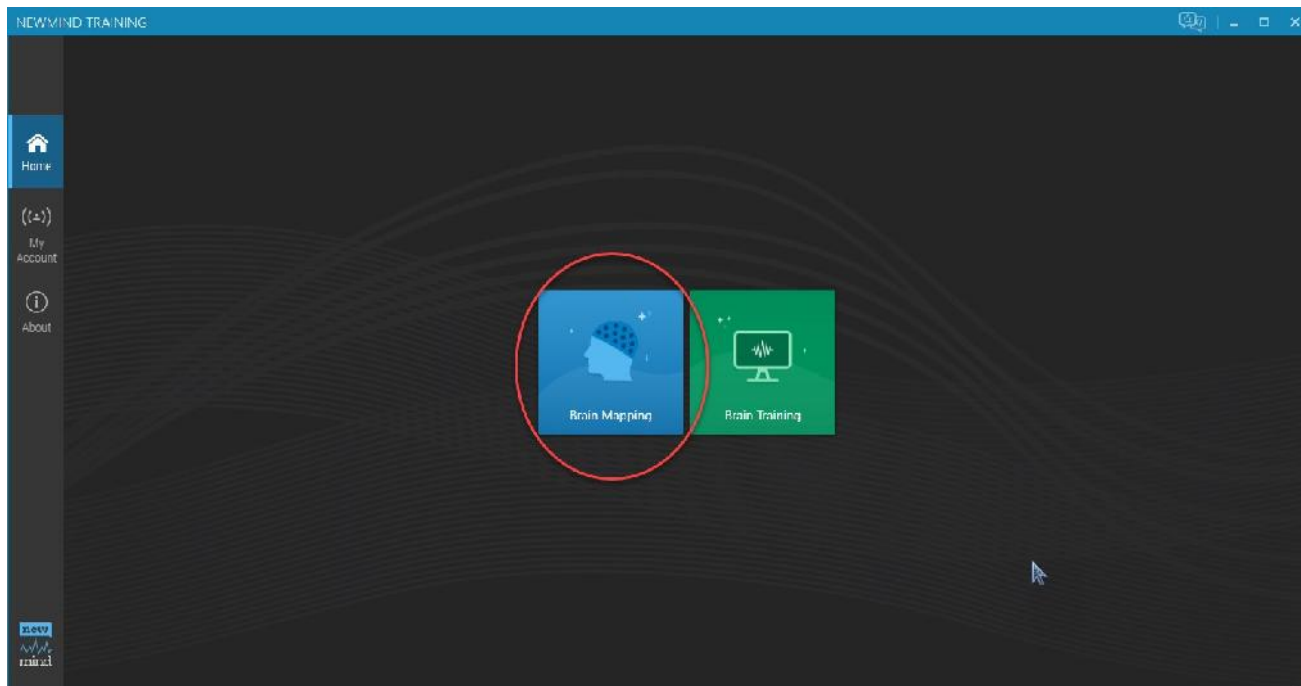
Enter the client number, First Name, Last Name, DOB, Sex, and Default Brain Map Size (which will be 19 point for most). Then click the *Add* button You can choose any number to start the numbering sequence for the client number.

You can now return to your NewMind Clinical software.



Conducting qEEG Brain Maps with the New Mind Trainer

If you are going to perform a QEEG Brain Map; from the “HOME” Menu **select Brain Mapping**.

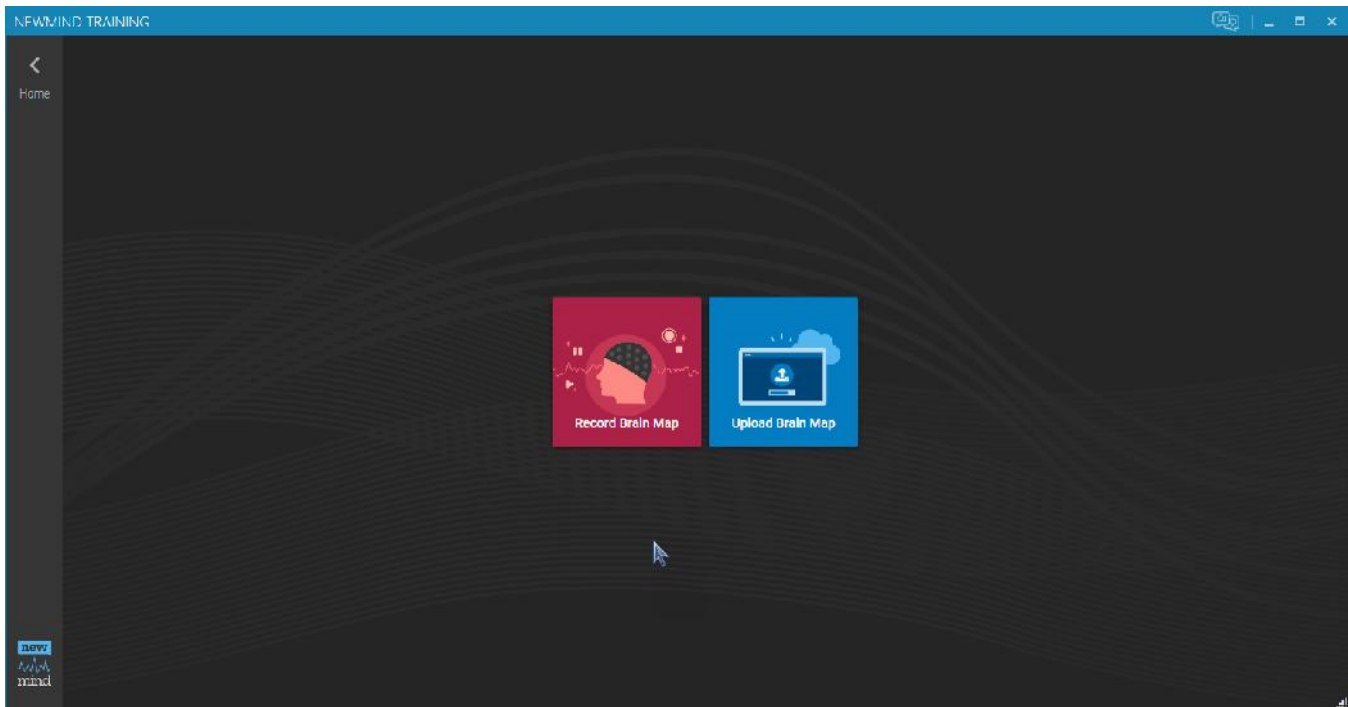


Prep the client / patient with QEEG cap and **plug cap into the New Mind Trainer**.

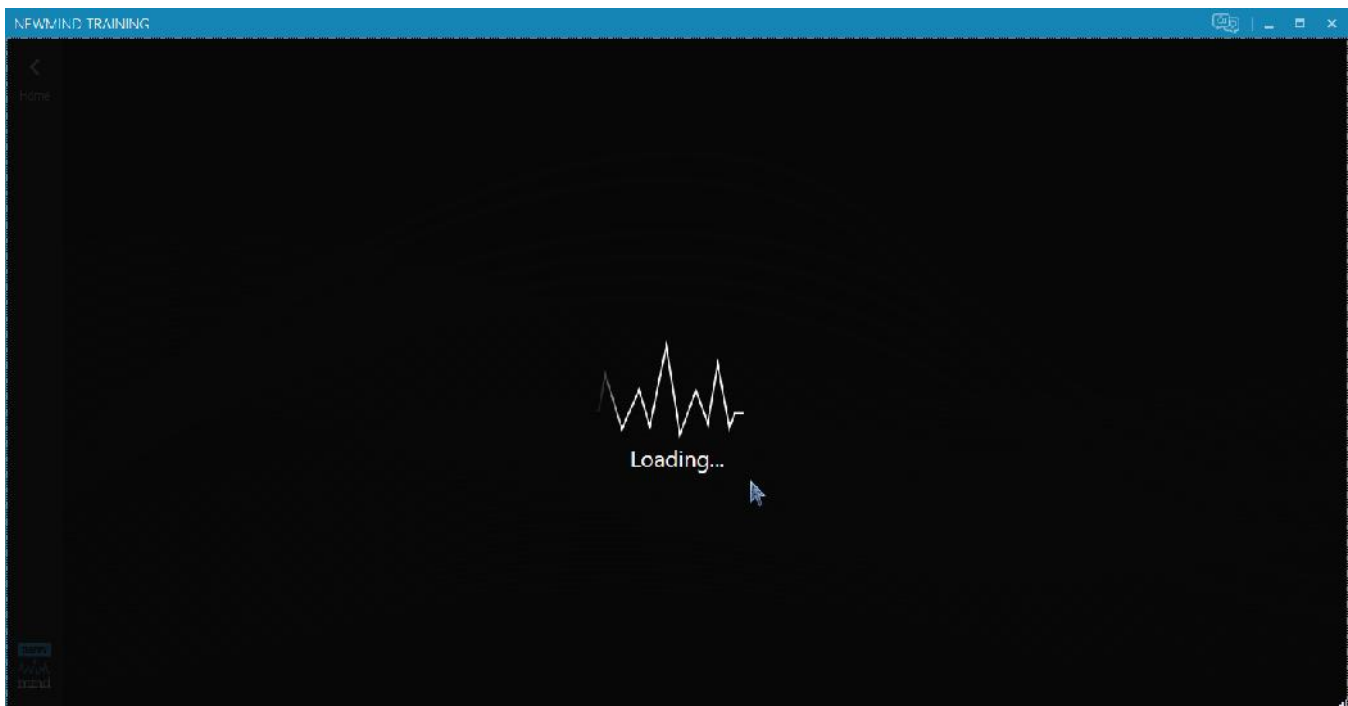
Note: whether you are using a 4-Channel or 20-Channel amplifier the cap will hook up in the same location.



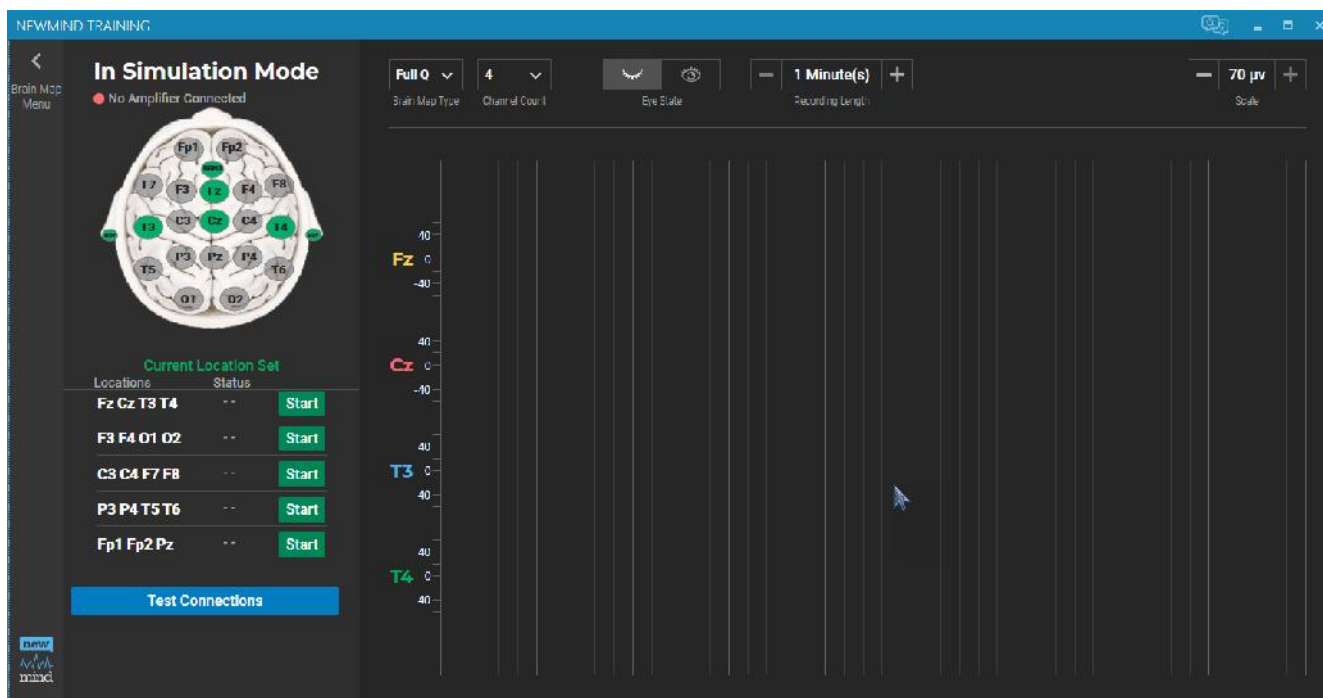
After clicking on **Brain Mapping**, this window appears. Click on **Record Brain Map**.



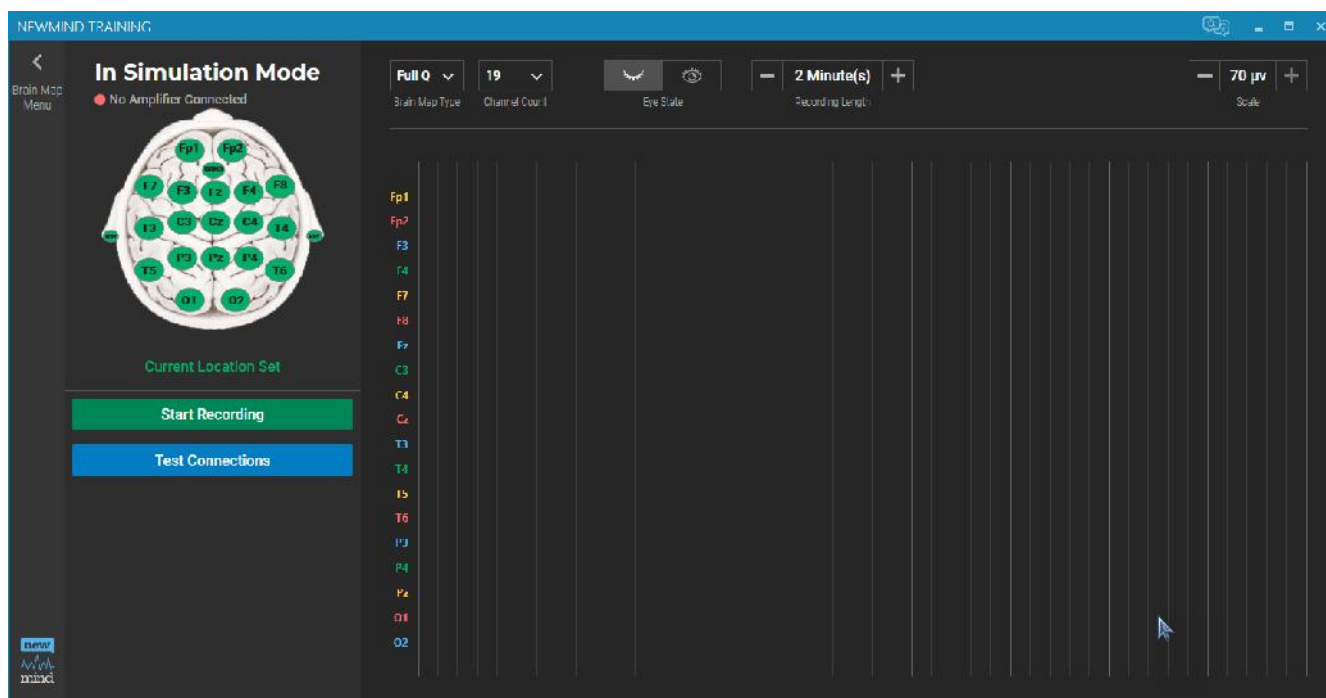
When you click on Record *Brain Map*, the following screen appears:



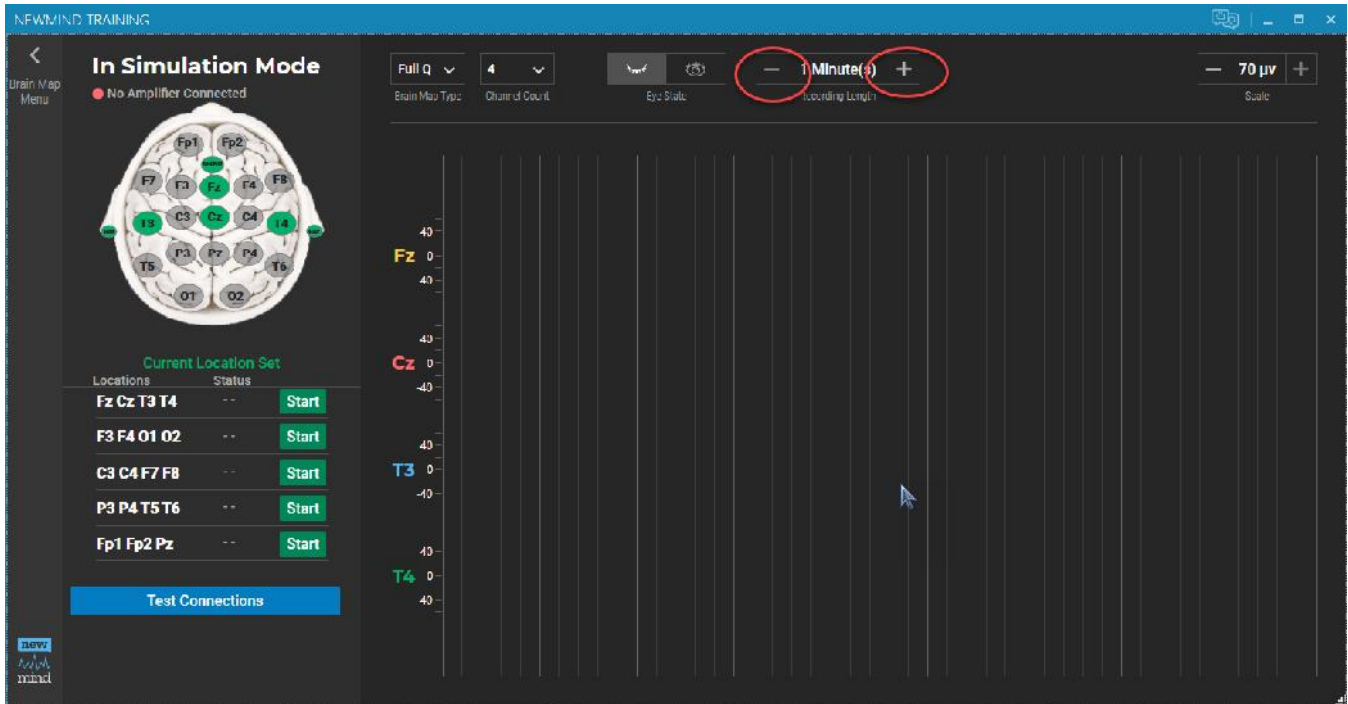
When using the *NewMind Trainer - 4 Channel* amp; once you have clicked on **Record Brain Map**; in the upper center of the screen under **EYE STATE** it will say *Eyes Closed* and you will see the brain diagram with ground (above Fz), references (ears), and the first four sites (**Fz, Cz, T3 & T4**). This is referred to as the first *run*



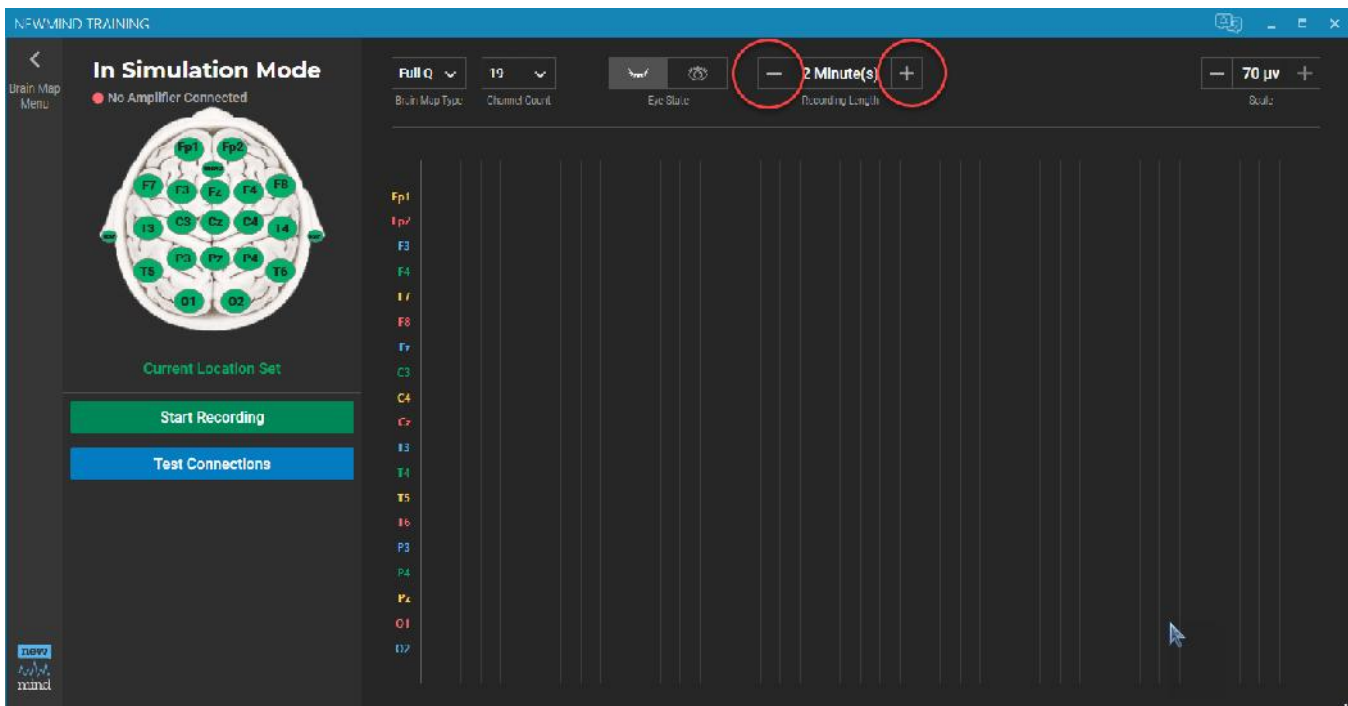
If you are using the NewMind Trainer 20, the following screen appear.



With the NewMind Trainer - 4 CH Amp, the default time for map recordings is **1 minute** for each run. You have the option of recording from 1 minute per location all the way to 20 minutes per location by clicking on the plus or minus in the Recording Length section.



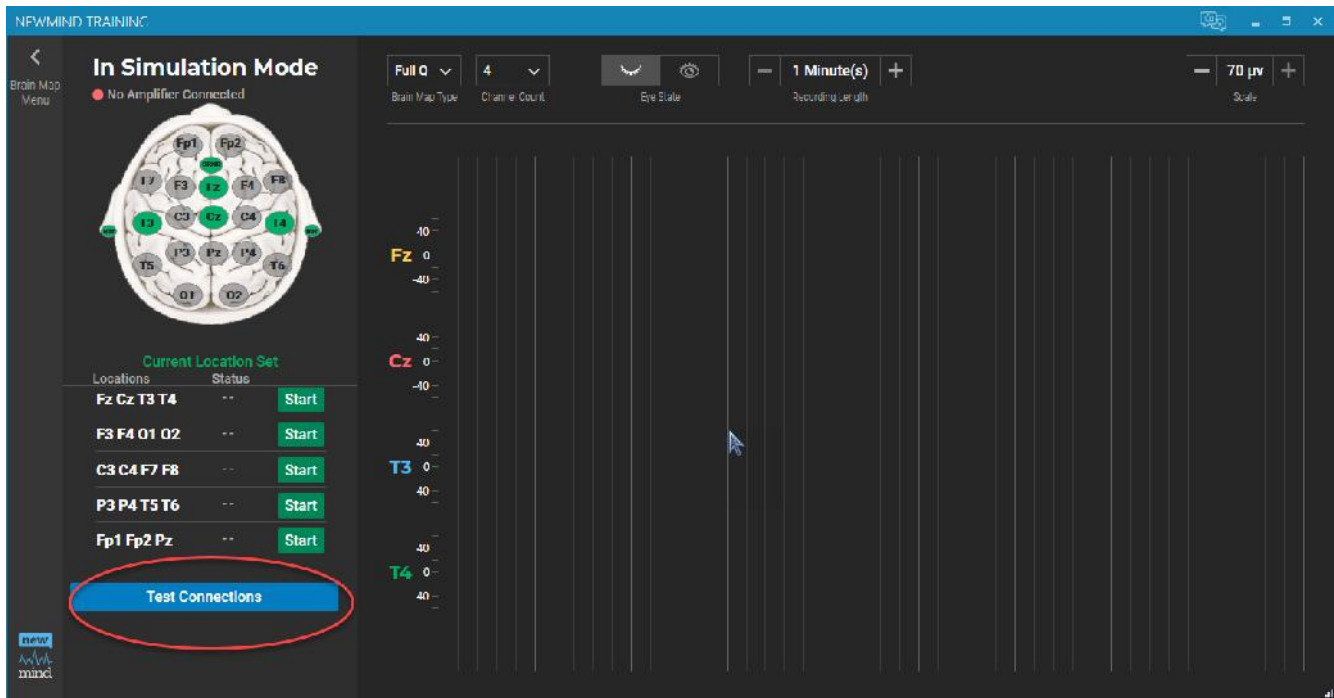
With the NewMind Trainer - 20 CH Amp, the default time for map recordings is **2 minutes** for each run. You have the option of recording from 1 minute per location all the way to 20 minutes per location by clicking on the plus or minus in the Recording Length section.



Checking Connections and Impedance

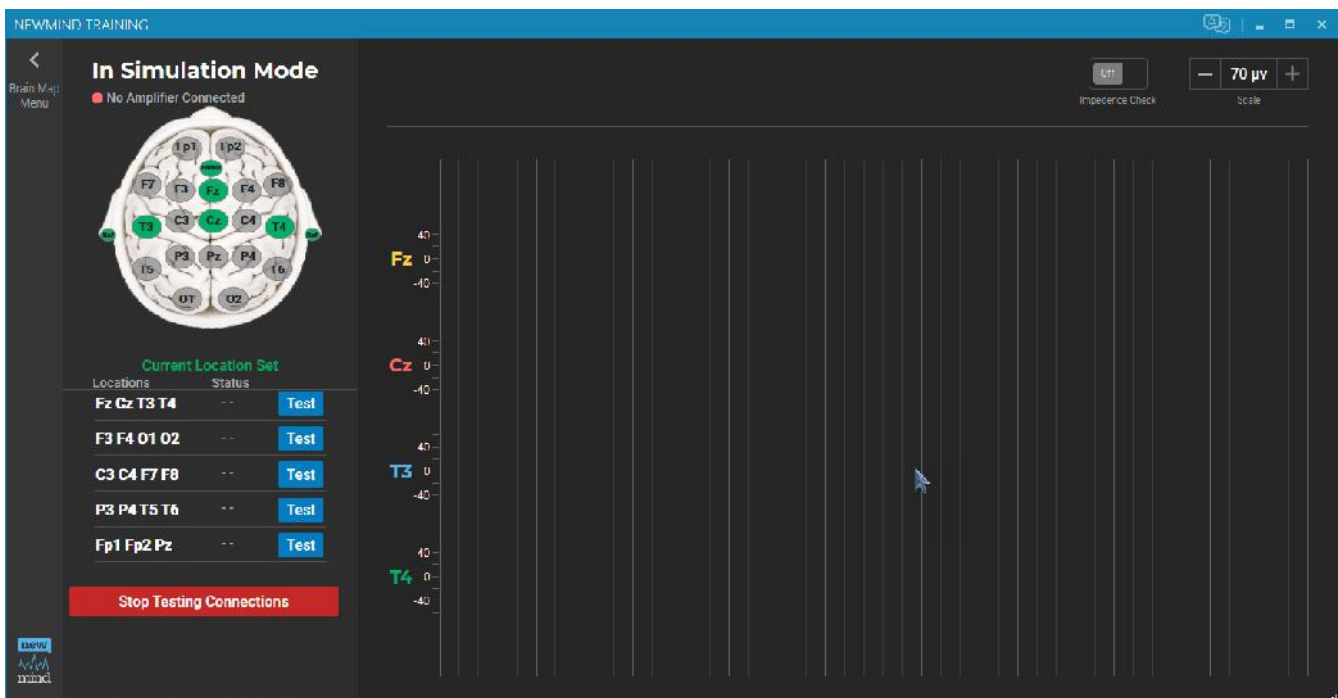
You can check your connections and impedance on all channels by selecting the sites you wish to check as illustrated below:

Click on Test Connection

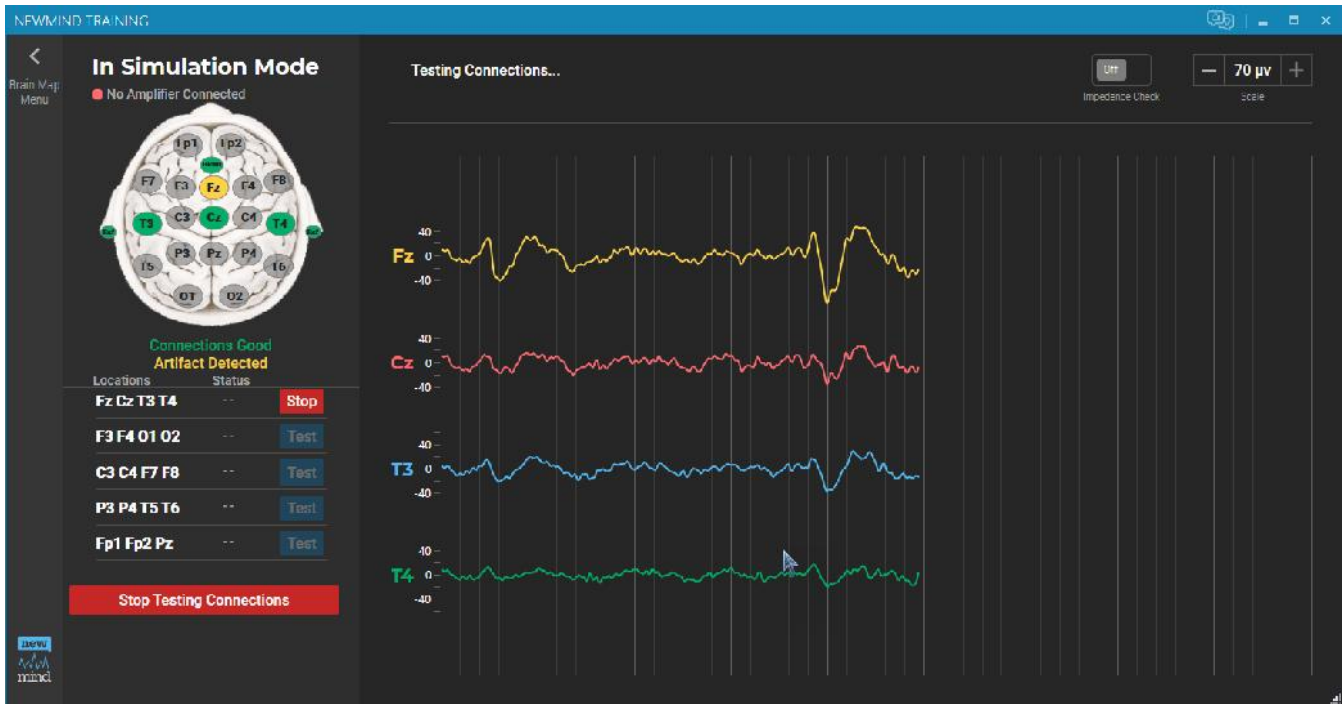


Next click on the Test button and the Test buttons will appear.

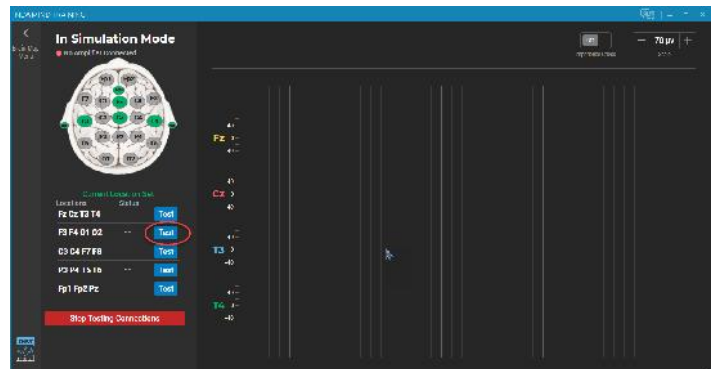
Click In Test



Clicking on any of the test buttons will start the testing process.



You can check your connections and impedance on all channels by selecting the sites you wish to check. When you are happy with the connections in the first set of locations click on the Stop button and then click on the Test button for the next set of locations.



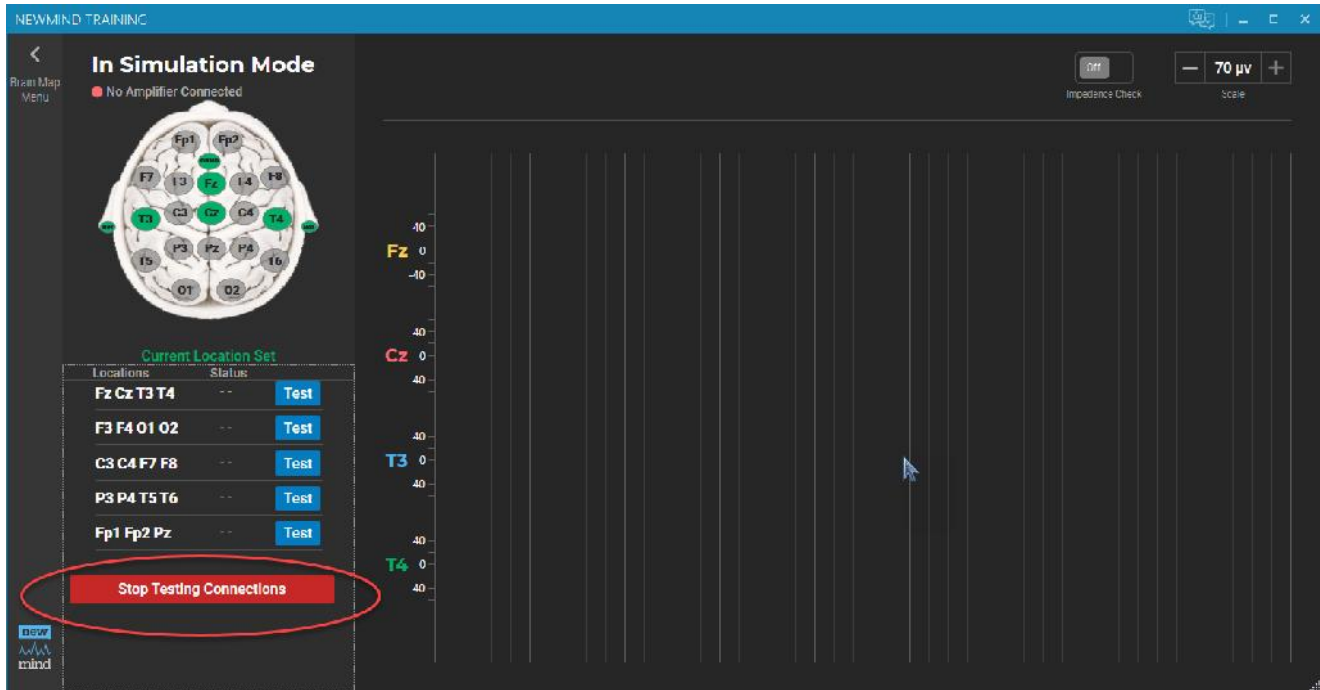
If you wish to check your impedance, after clicking on test connection **click on the Impedance Check tab** to switch it from off to on. The following screen appears:

If any of the locations have high impedance they will be indicated by a red dot instead of a green dot. To correct the impedance issue insert the syringe and needle back into that location the push hair out of the way and inject a small amount of electro-gel to lower the impedance. Once the impedance improves the location will turn from a red dot to a green dot.

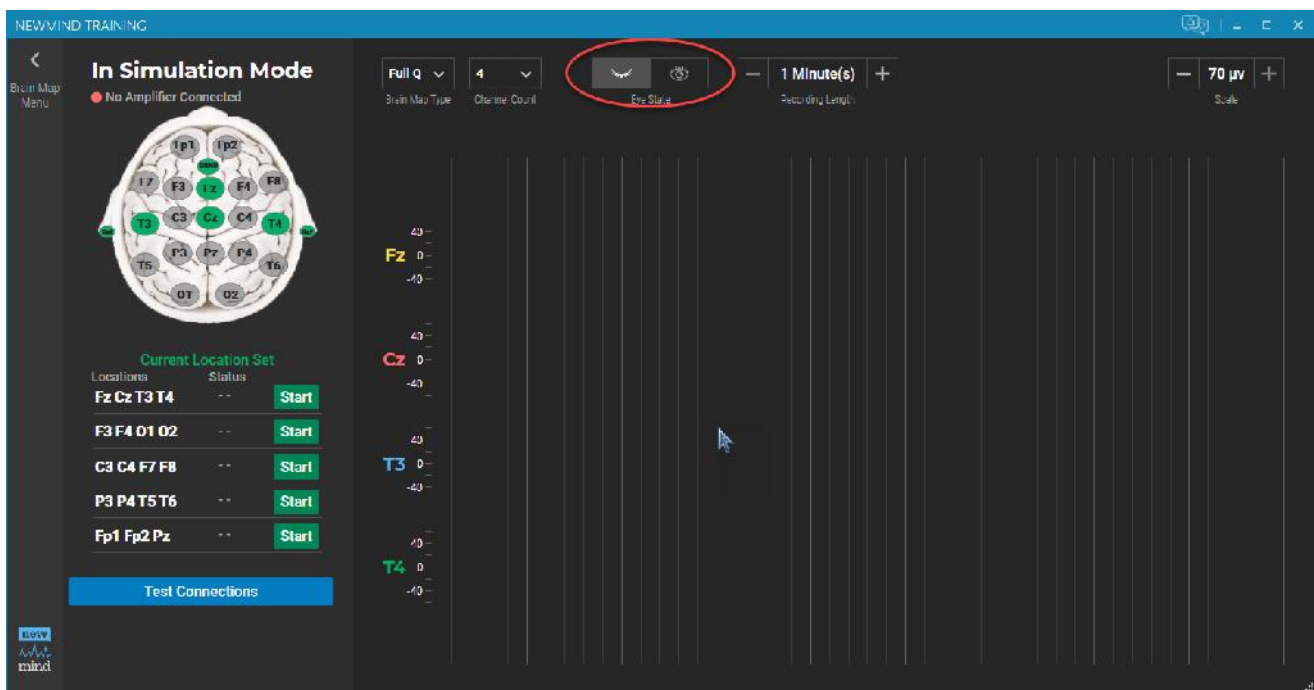
NOTE: Checking Connections and Impedance is the same with the NewMind Trainer 20 Amp.



When all connections are good, **click on Stop Connection Test** and you are ready to begin mapping.

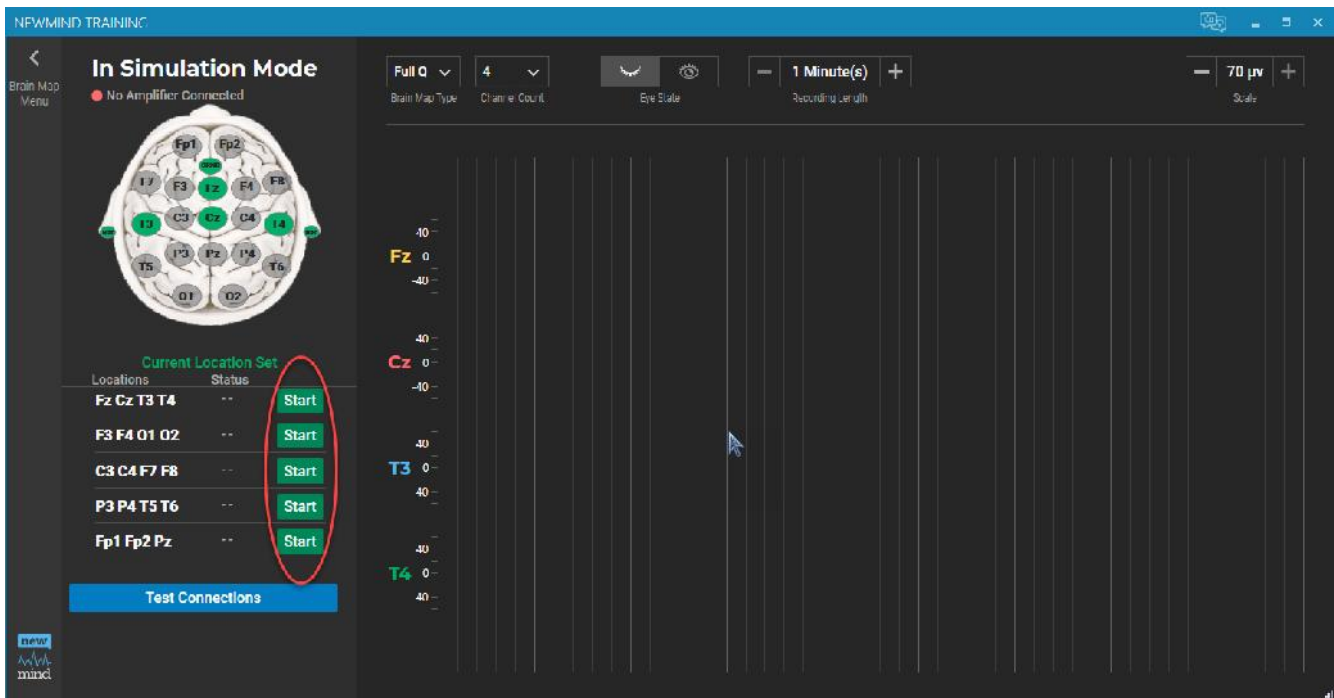


Select Eyes Closed vs. Eyes Open Map. The Default setting is eyes closed.



Recording the Eyes Closed Map

TO BEGIN MAPPING, Click on Start on the sites you wish to record.



In the example below, Fz, Cz, T3, and T4 are selected. The software will begin to take a baseline reading to perform the auto-artifacting function. During the Baseline period a statement *“Recording will start when auto-artifact baseline acquired”* appears on the screen.



NOTE: The software will begin to take a baseline reading to perform the auto-artifacting function. During the Baseline period a statement *“Recording will start when auto-artifact baseline acquired”* appears on the screen.

After approximately 30 seconds you will see the word **RECORDING** in Red Letters next to the locations you are recording and the clock will start running (the clock stops if the software detects artifact).



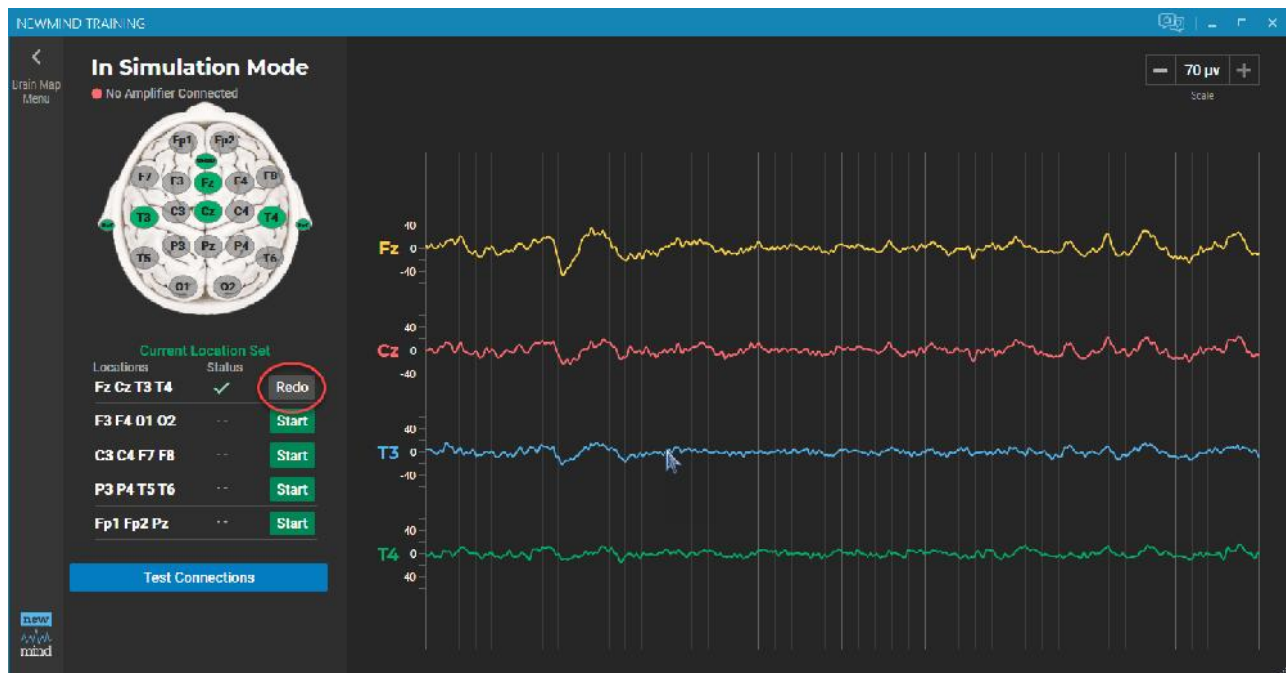
During map recording you can click on the plus (+) or minus (-) icons in the "Scale" tab to adjust the size of EEG being reviewed. Below is the default setting. The plus and minus values are at 70 microvolts.



Clicking the plus (+) sign reduces the size of the EEG. In the example below the plus and minus (-) values are at 20 microvolts



If you are using the 4 Channel NewMind Trainer Amp, after a minute of recording (or two if 2 minutes was selected) the following screen appears. If the patient/client was moving or the recording was filled with too much movement and artifact, you can redo a measure at the same 4 sites by clicking on **REDO**.

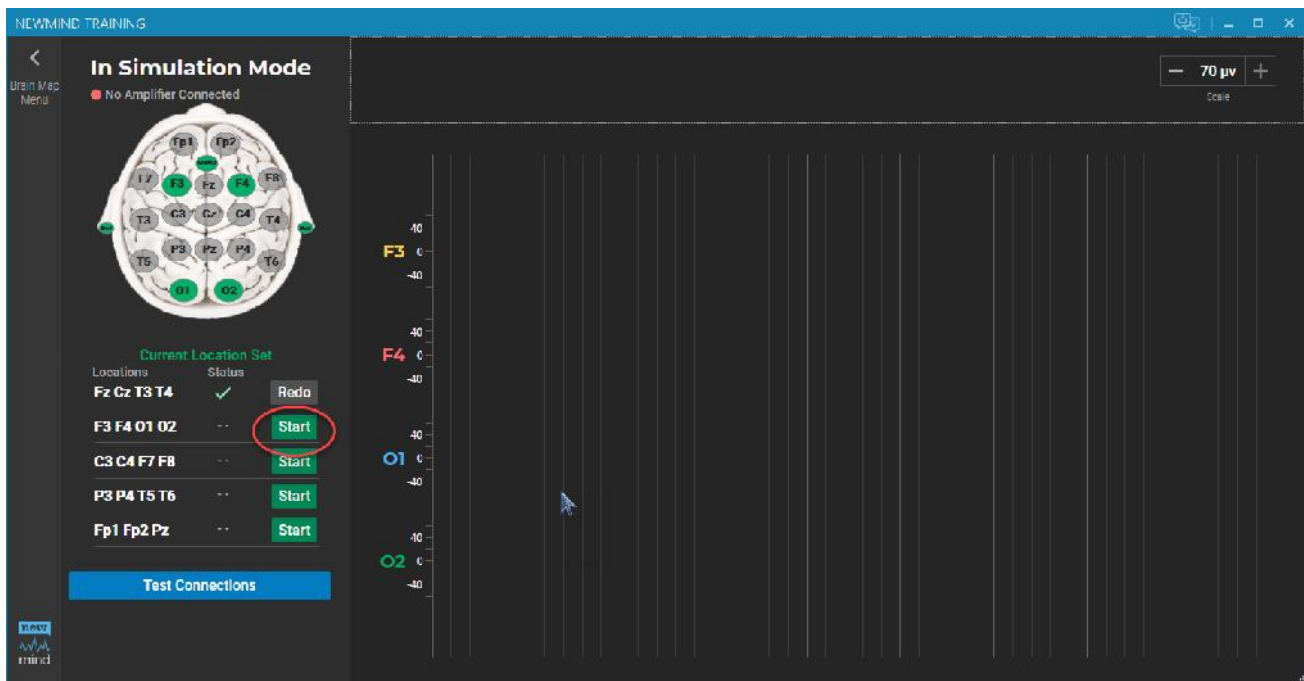


Otherwise you will click **START** on the next 4 sites. **NOTE:** At the beginning of each recording run you can click on Test Connection and then Impedance Test and follow the Impedance check as outlined above.

Once you have clean data from the first run



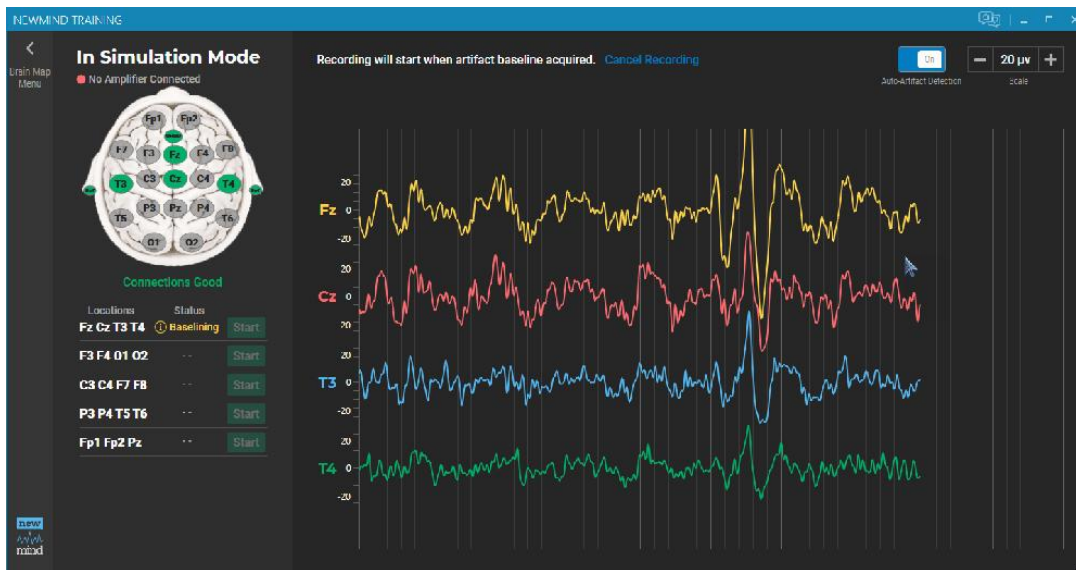
Click **START** for the second run.



As noted above, you can redo any of the already recorded sites or otherwise move to the next locations until all five runs have been completed.

NOTE: The process for *Testing Connections, Testing Impedance, Disabling Auto-Artifacting* and resuming *Auto-artifacting* are the same for all 5 runs when doing a QEEG Brain Map.

At the beginning of each run, the software will begin to take a baseline reading to perform the auto-artifacting function. During the Baseline period a statement “Recording will start when auto-artifact baseline acquired” appears on the screen



After approximately 30 seconds you will see the word **Recording** in red letters in the upper left-hand corner and the clock will start running (the clock stops if the software detects artifact)



If you are getting too much artifact you can disable auto artifacting by **clicking on Auto-Artifact Detection** and the recording will continue uninterrupted.

Auto Artifact On



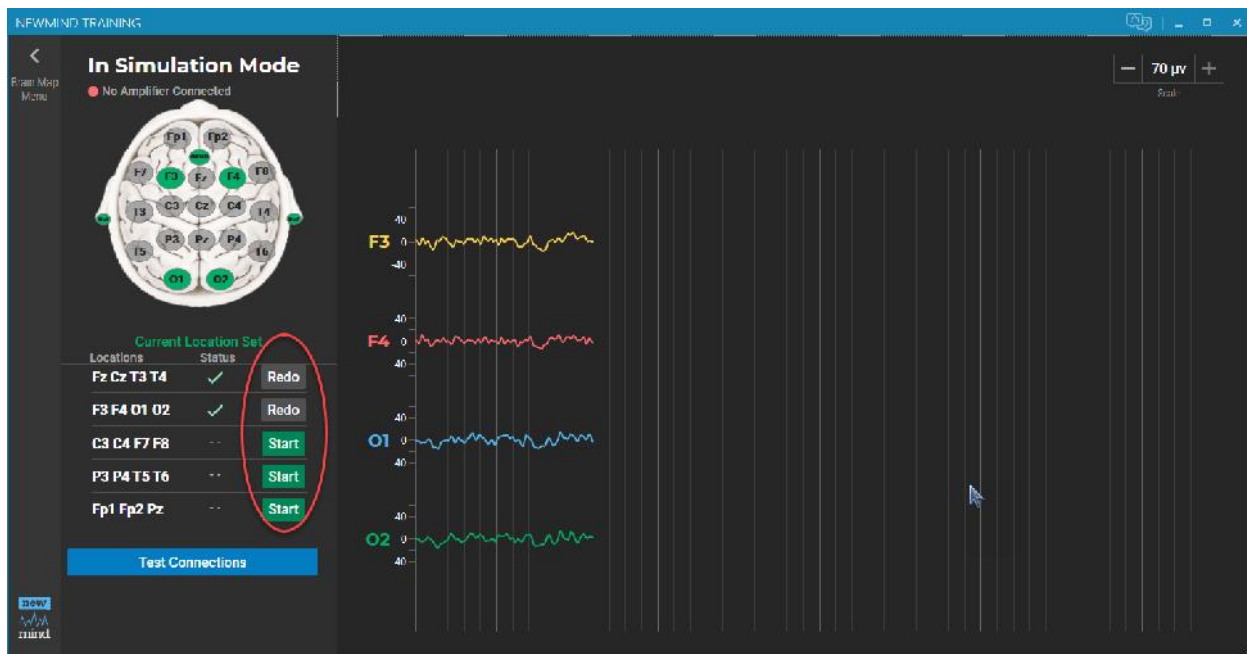
Auto Artifact Off



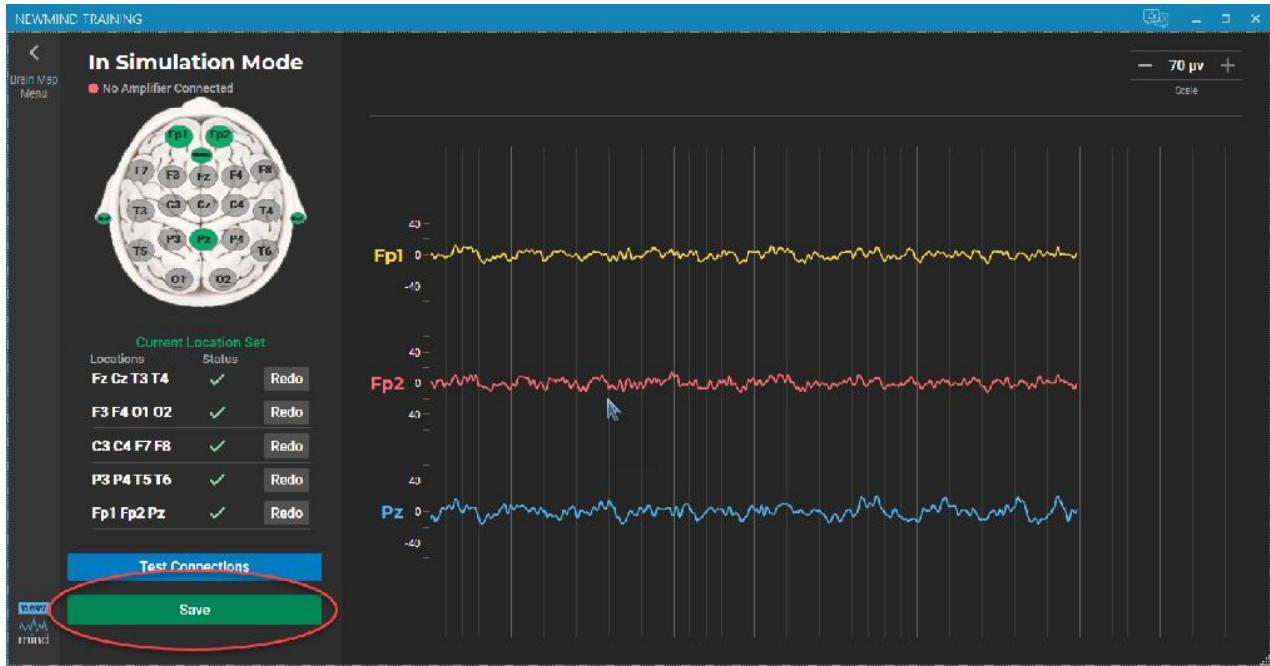
If the artifact settles down you can click on **AUTO-ARTIFACTING**, and auto-artifacting will resume. You can do this during any of the mapping segments.



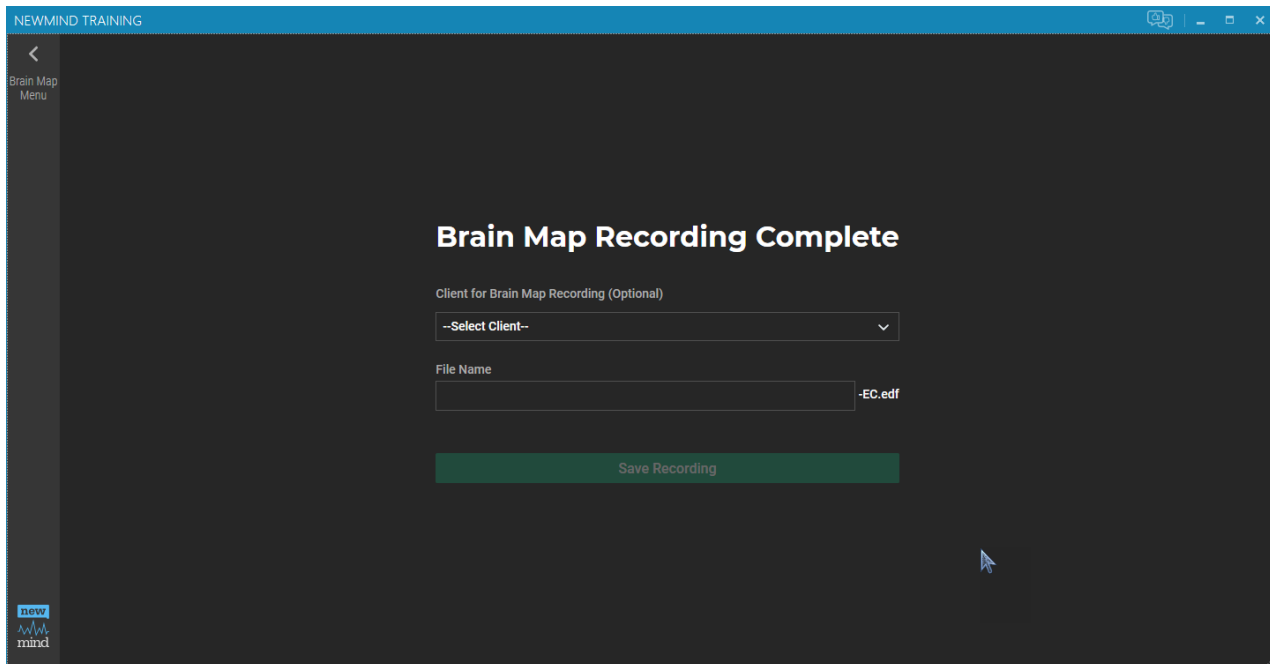
As you move through the five runs with the NewMind Trainer – 4 CH Amp, the already recorded sites will change from **START** to **REDO**



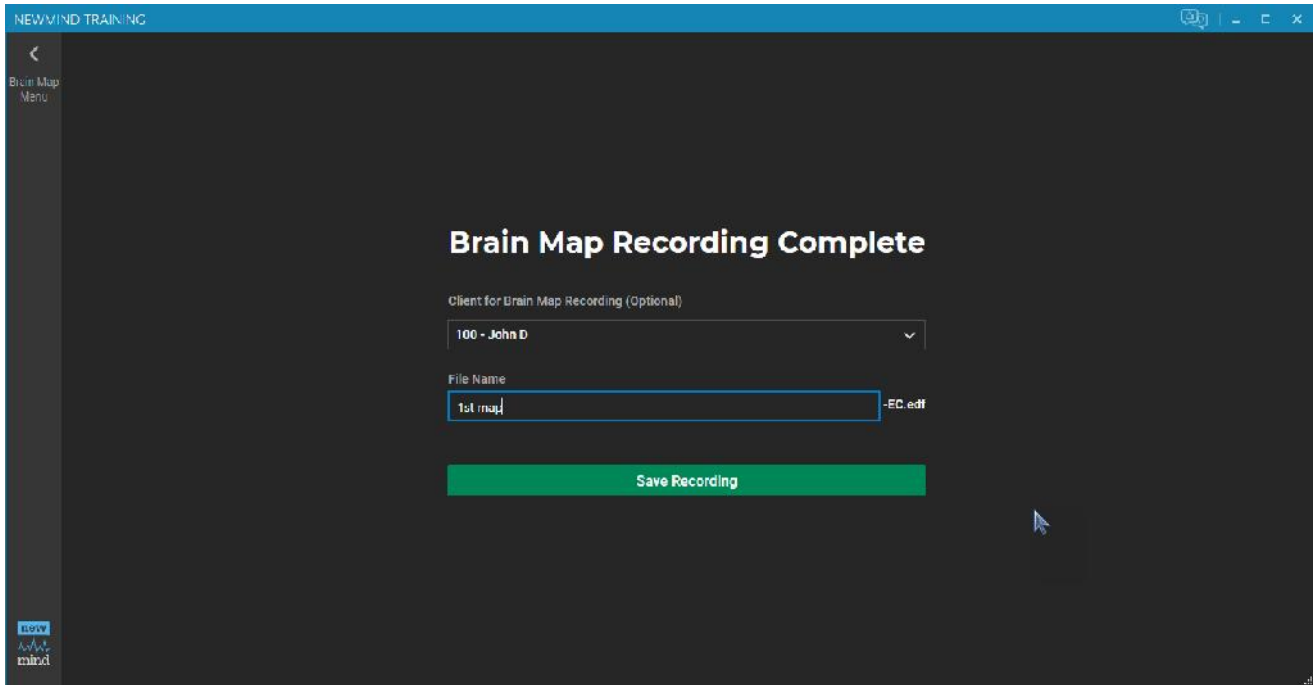
When all five runs have been completed the following window appears as illustrated below:



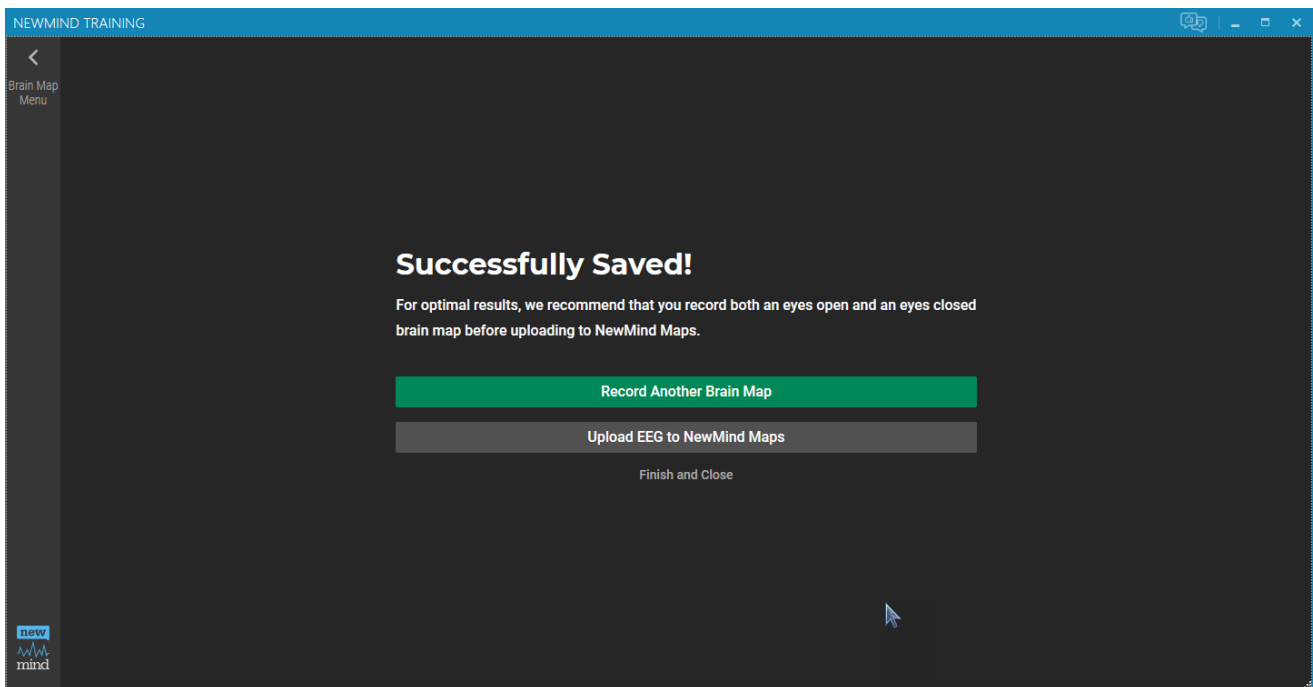
Once you have taken measures at all sites and performed any “REDOs” **Click on SAVE**. The following window appears.



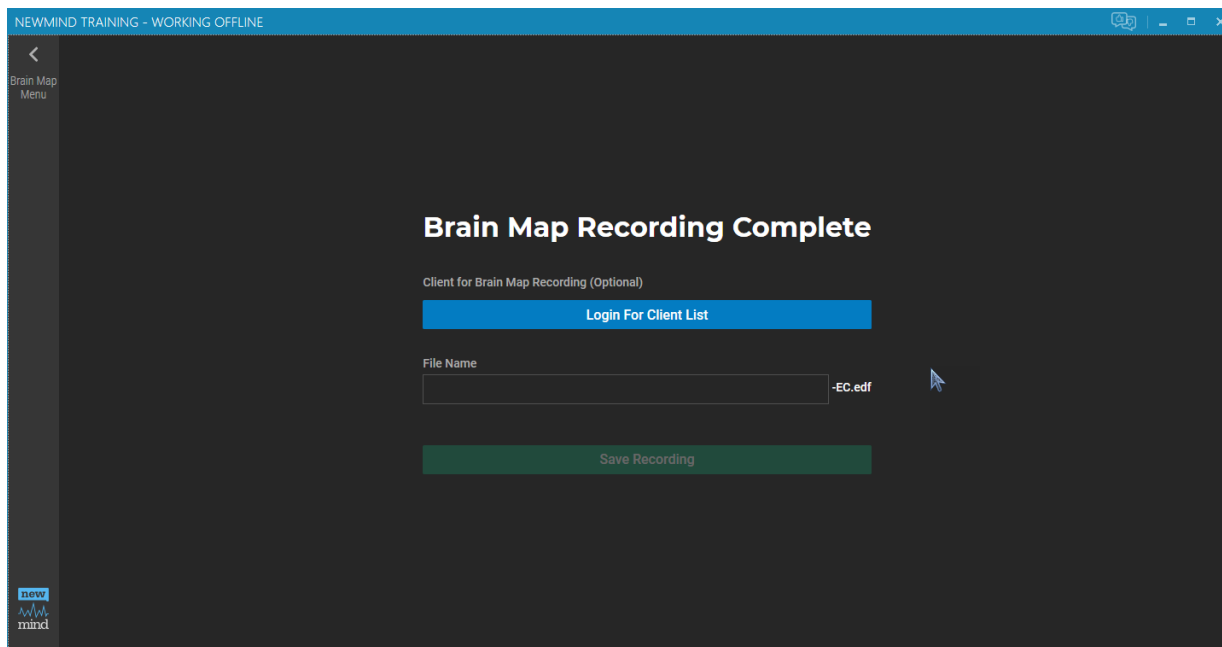
Select the Name of the client/patient, and label the QEEG file:



Click on **Save Recording**. The following window appears

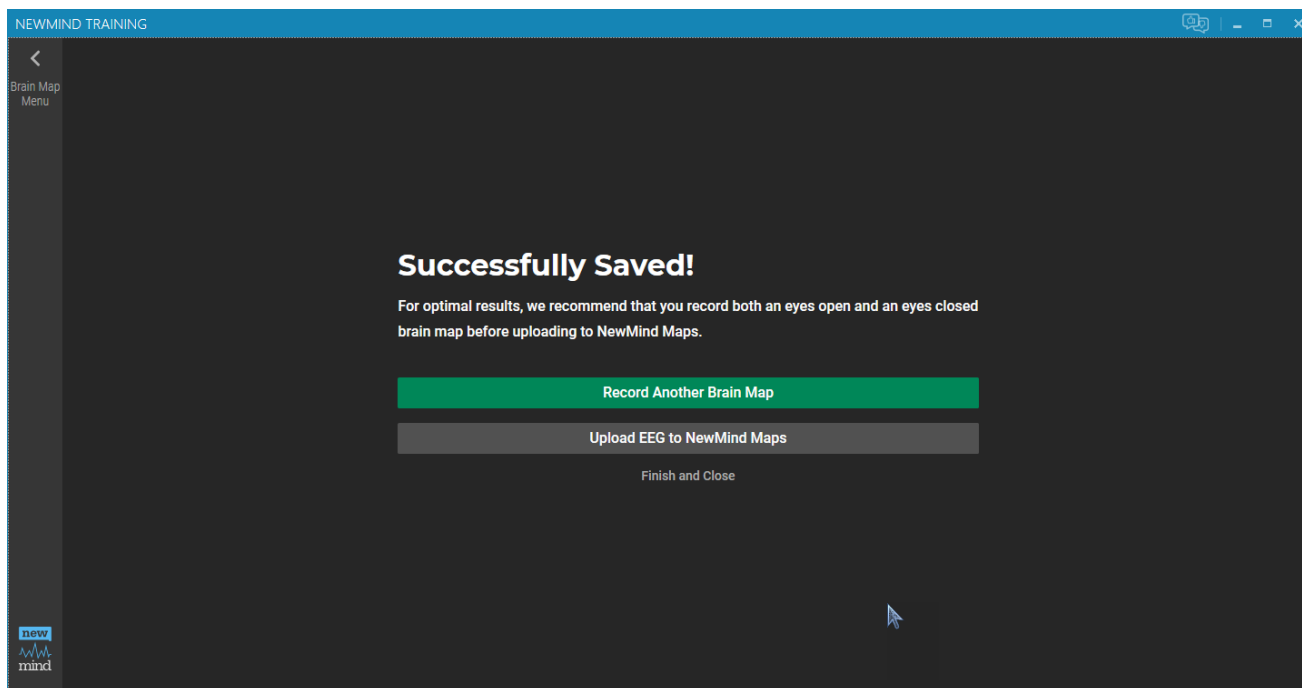


If you are mapping offline in the **Brain Map Folder** the following window appears



You will need to log into your *NewMind Maps* account, enter your *User Name* and *Password*, and then follow the process outlined above on page 35-36.

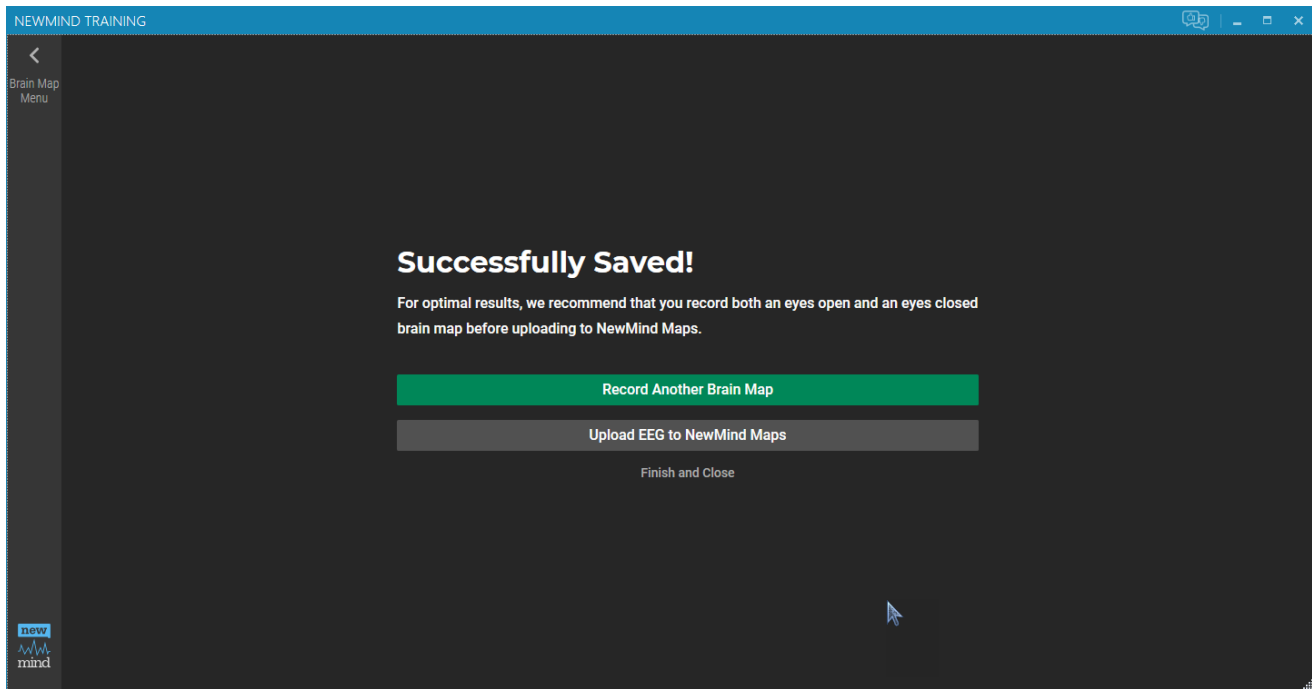
The following screen appears



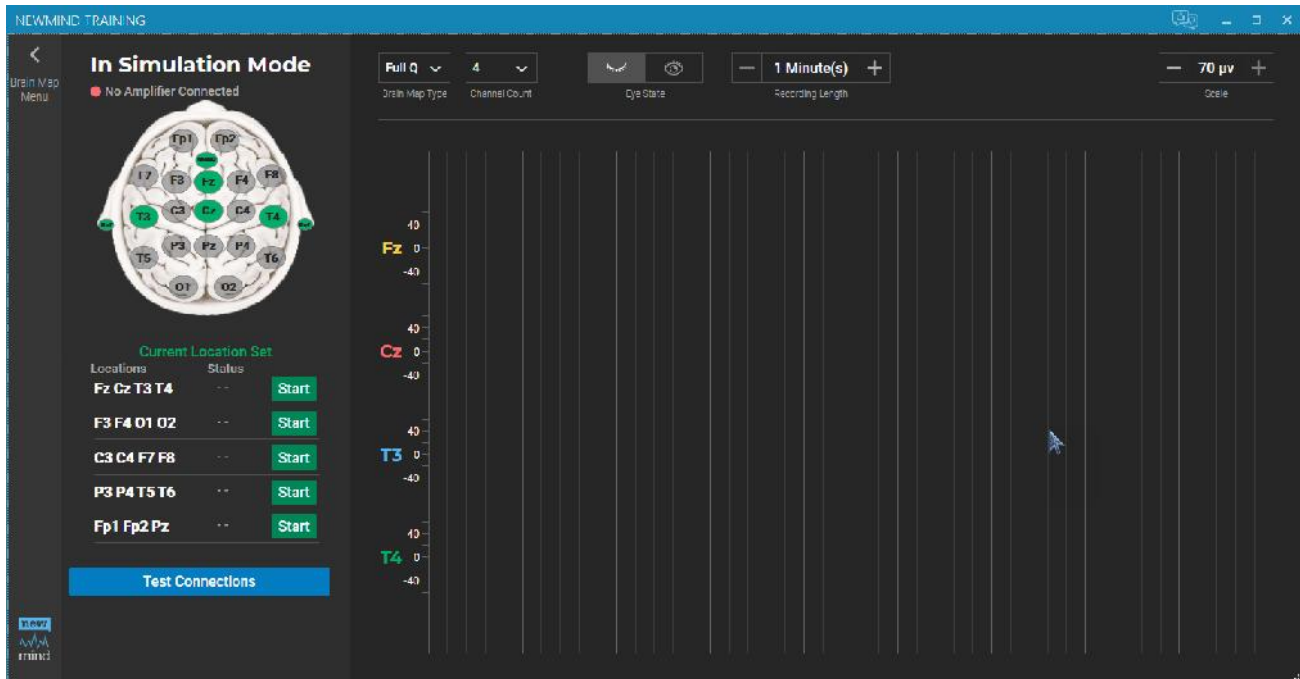
At this point you can **Record Another Brain Map**; or **Upload This Brain Map**; or click on Done to exit mapping. We will continue the manual with recordings the eyes open map.

Recording the Eyes Open Map

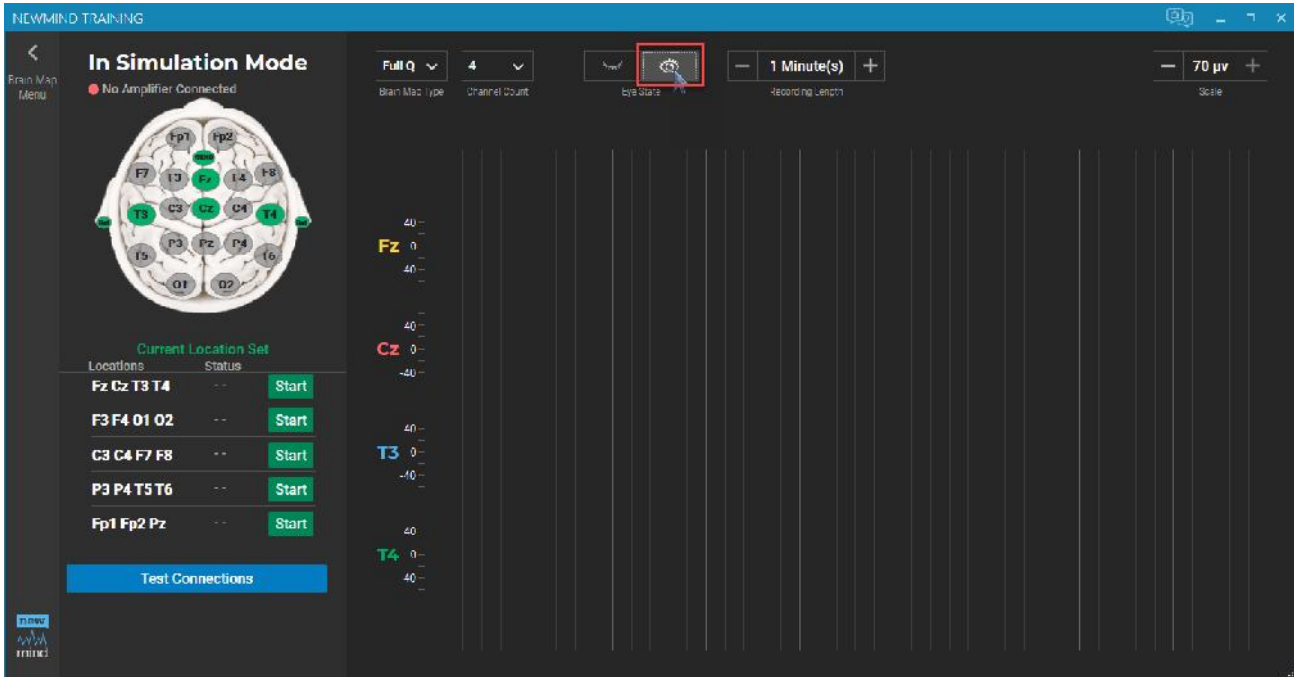
Click on [Record Another Brain Map](#)



The following Screen appears



Click on the **Eyes Open** eyes open image in the Eyes State section.



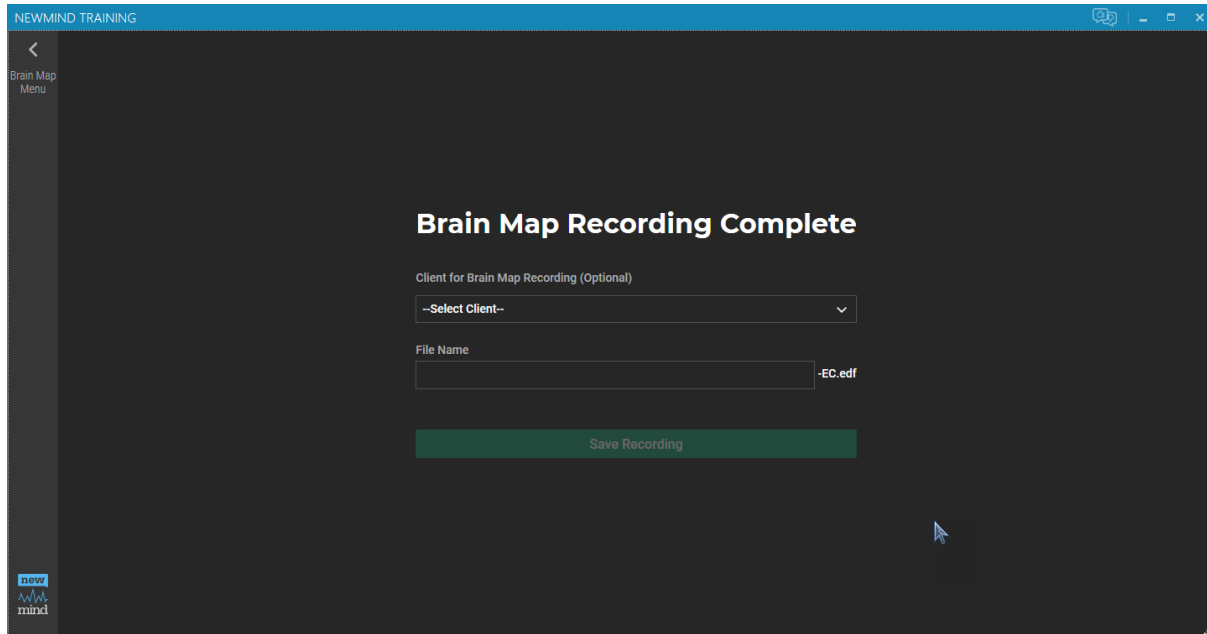
To conduct the *Eyes Open map*, follow the exact same process done for the eyes closed map on pages 25-33.

When all five runs have been completed the following window appears as illustrated below

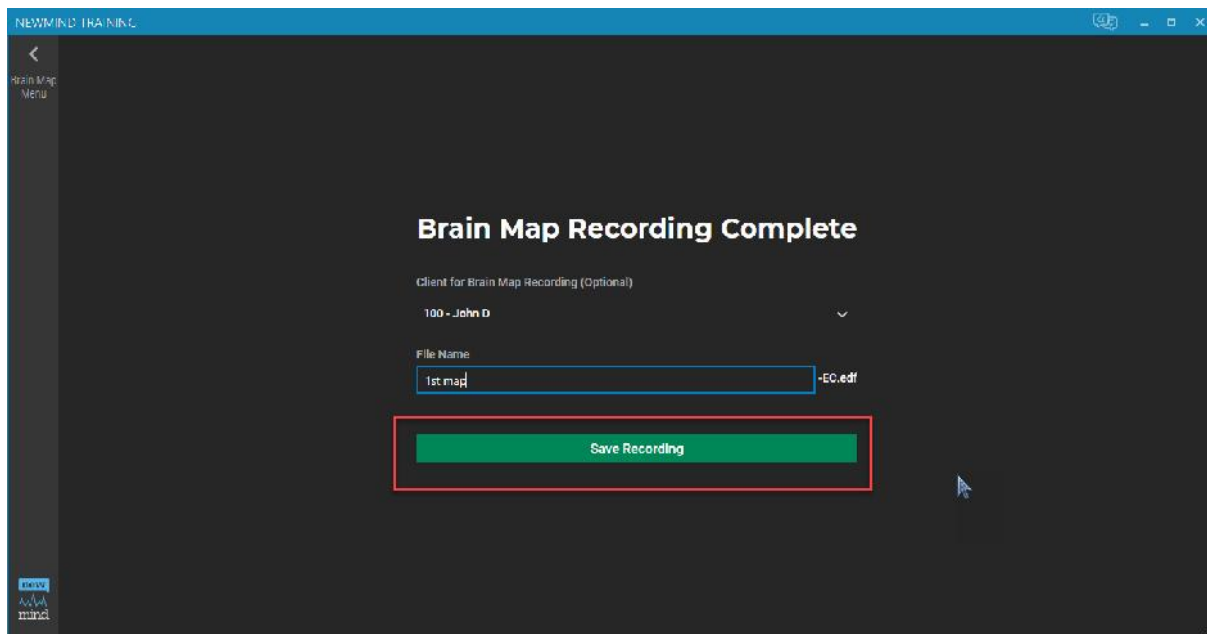


Once you have taken measures at all sites and performed any “REDOs” **Click on SAVE.**

The following window appears.



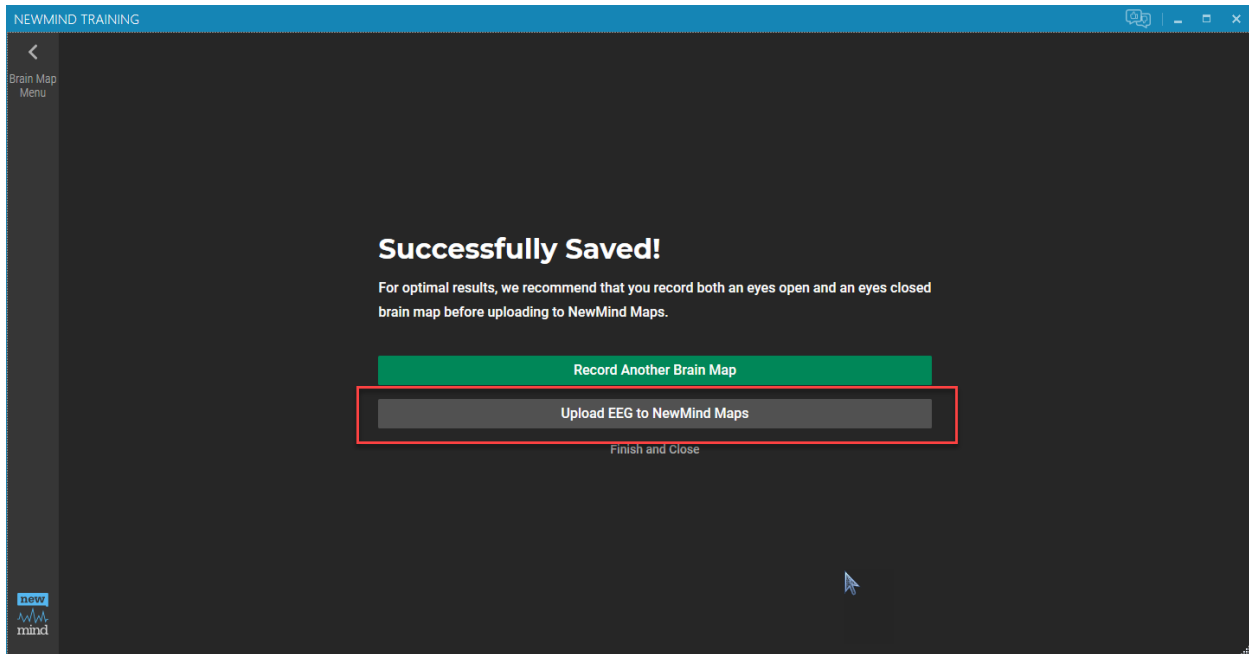
When the eyes open map is done follow the same process done for uploading the eyes closed map. In this case however, the popup screen will look like the following when you select the eyes open recording. *Select the Name of the client/patient, and label the QEEG file*



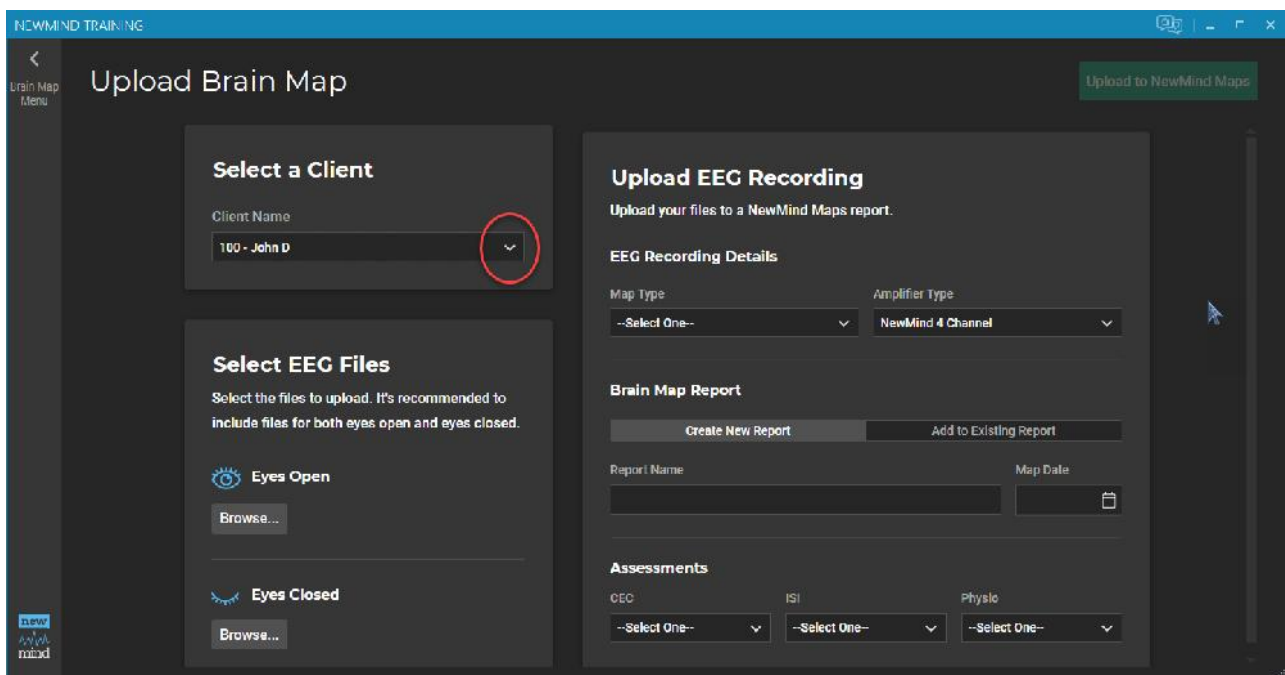
Click on Save Recording

Uploading the Recording to NewMind Maps

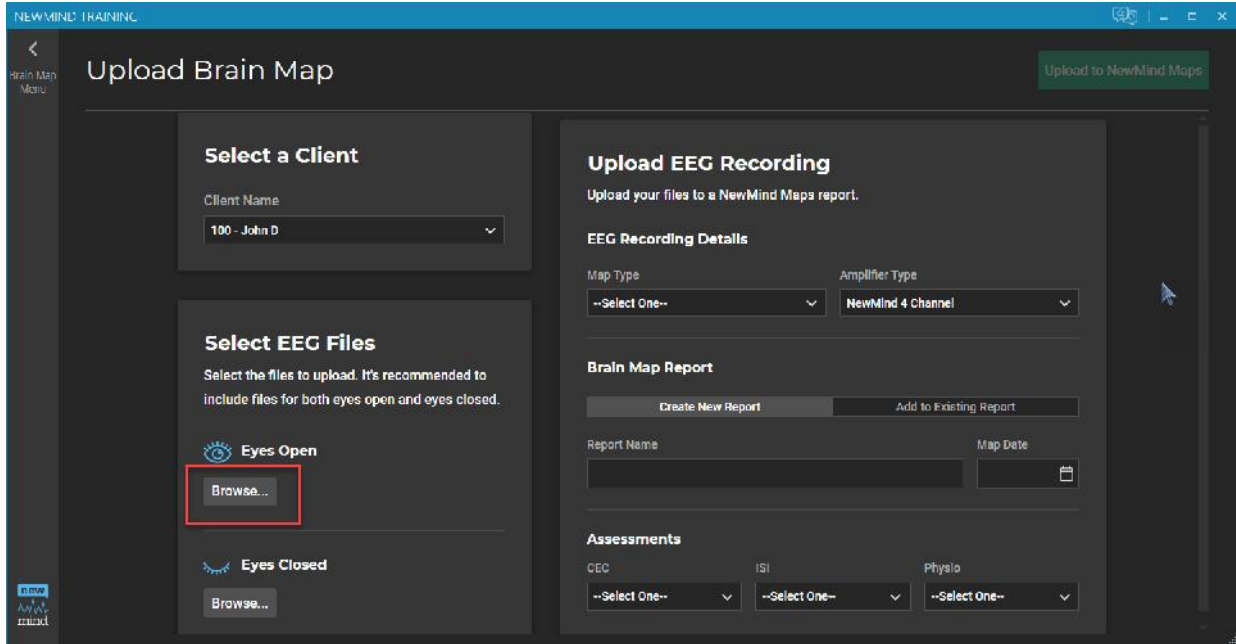
After you have recorded both the eyes closed and the eyes open map you are ready to upload them to NewMind Maps. Click on **“Upload EEG to NewMind Maps”**.



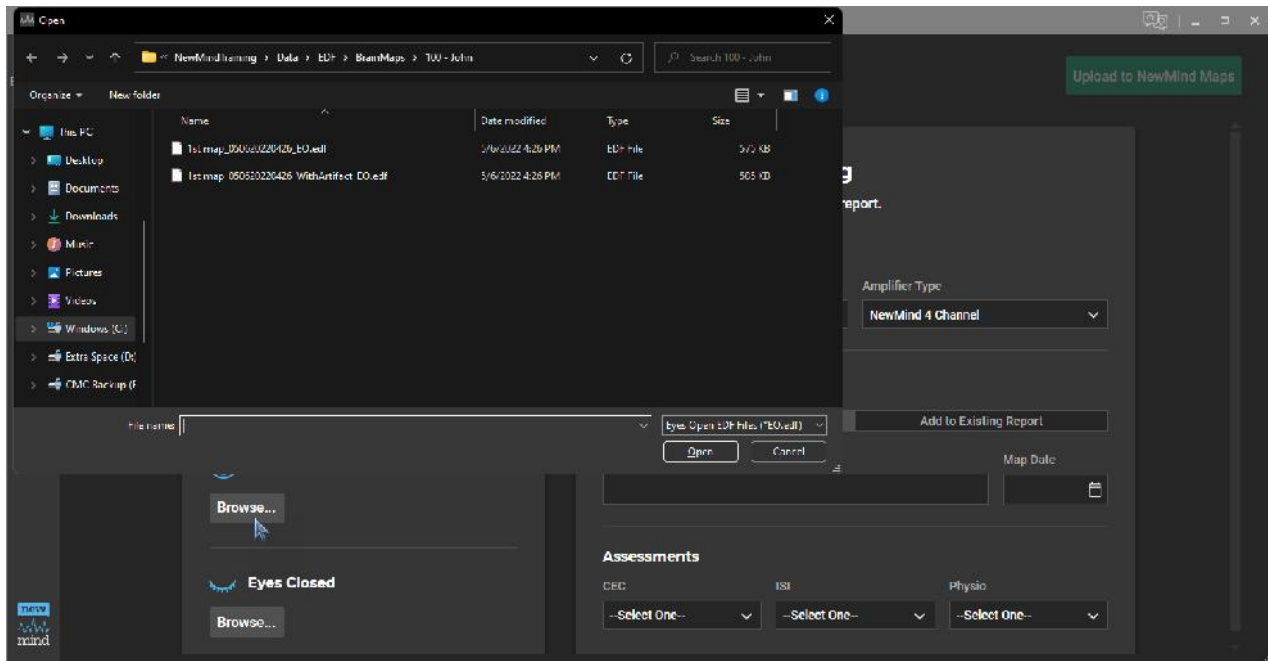
The clients name should automatically appear in the “Selected Client” section. If it does not click on the drop down menu and select them from the available clients.



Click on the Browse tab to select the Eyes Open file.

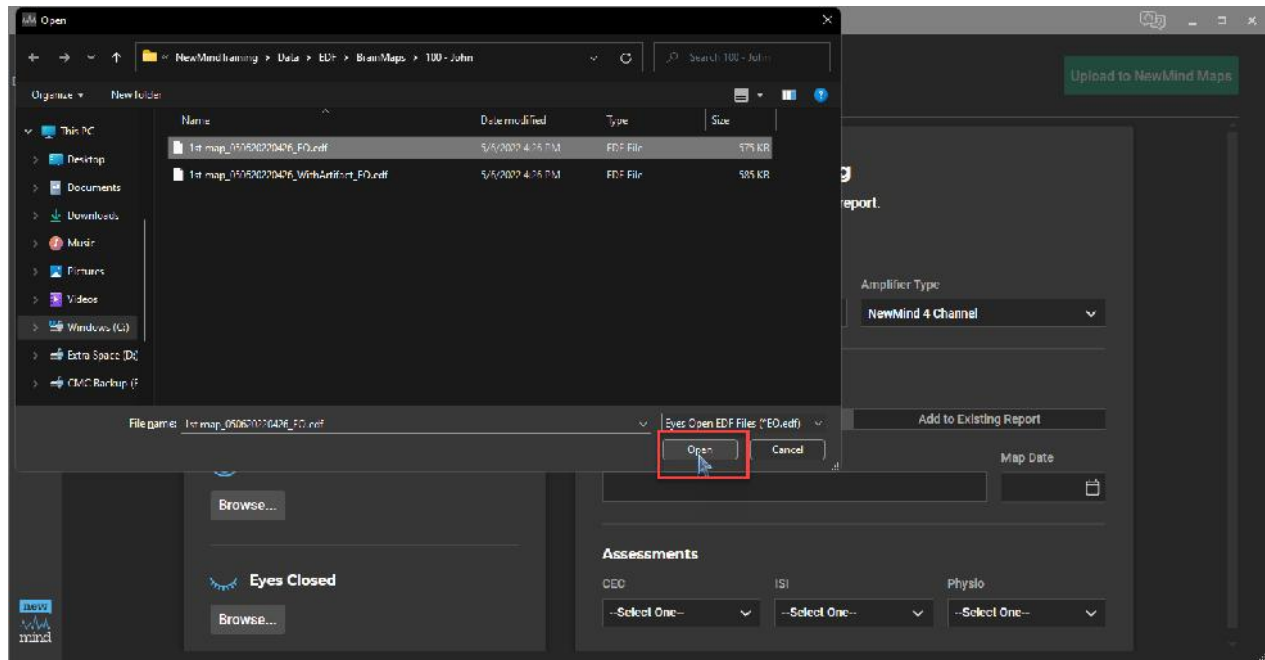


The following screen appears.



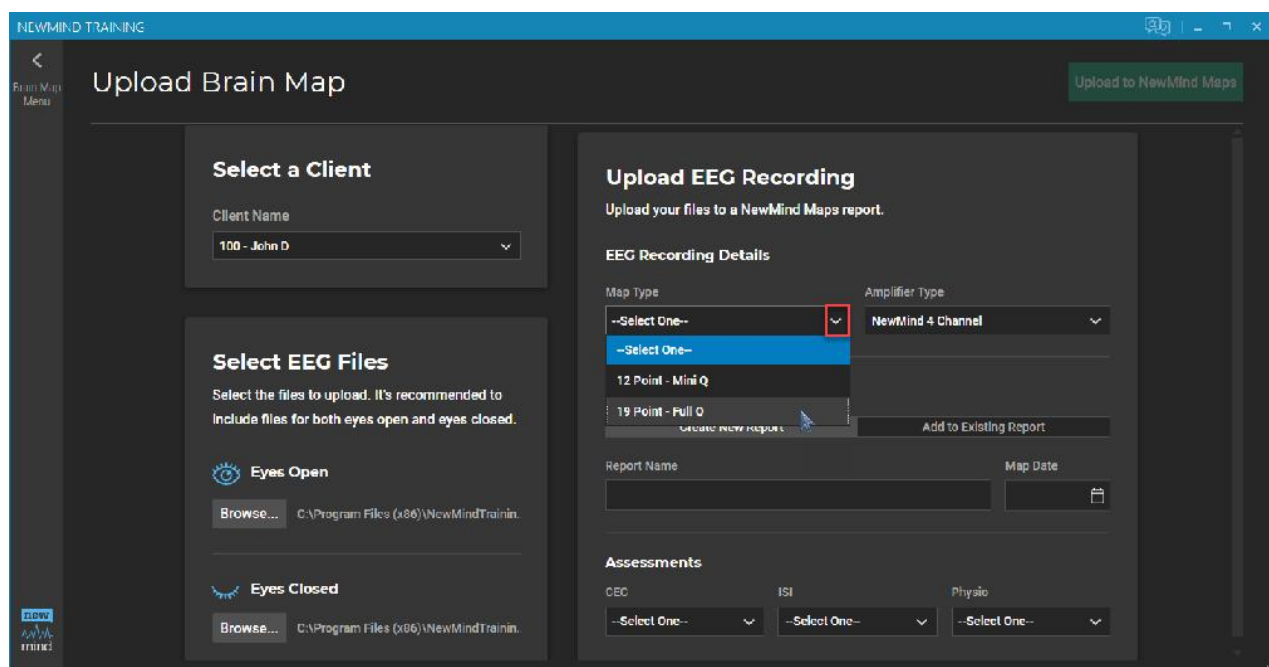
Highlight the Eyes Open file as illustrated below and then click on Open.

The first file will be the recording with the artifact removed by the software. The second file that contains “WithArtifact” is the non-artifact version that will need to be hand edited with the EEG Editing tool in NewMind Maps.

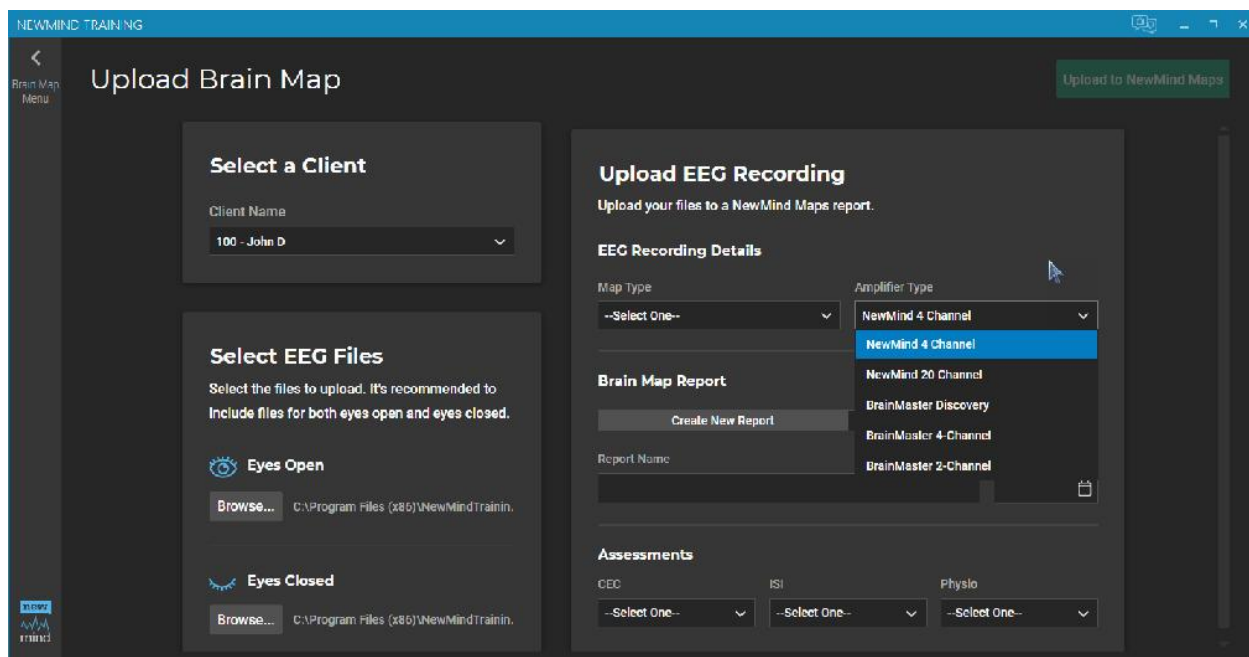


Repeat the step above to upload the Eyes Closed recording.

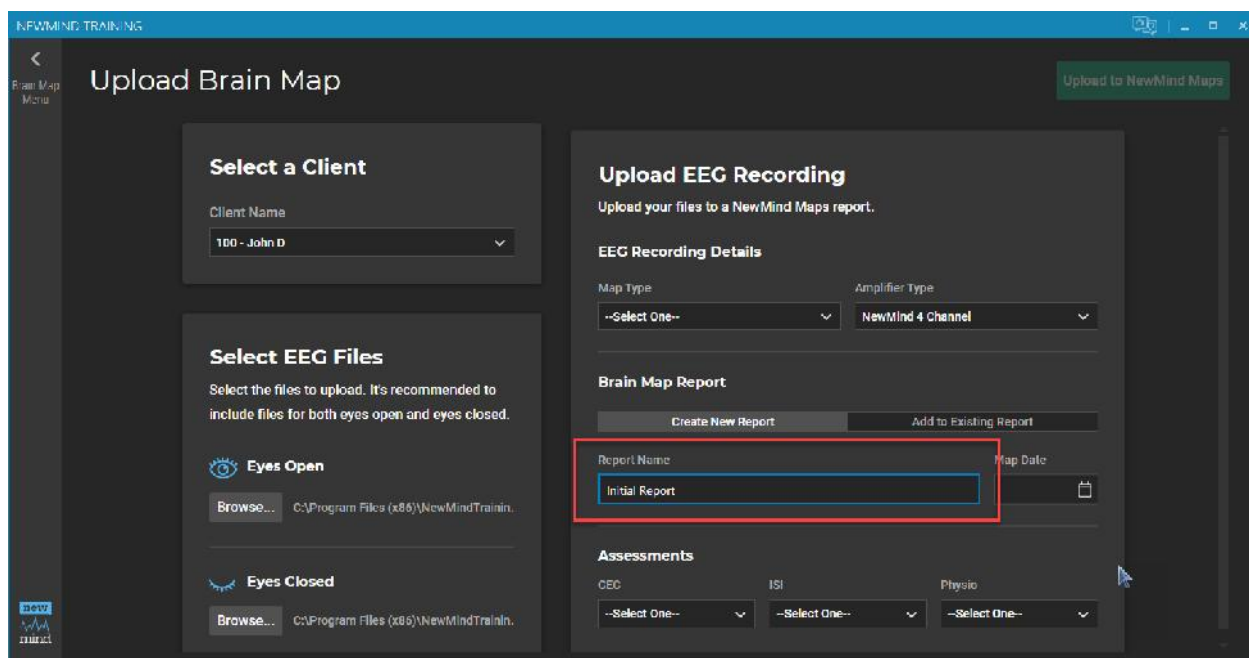
Next select the Map Type. If you are using a NewMind 4-channel or 20-channel amplifier you will select “19 Point—Full Q”. **If you are using the BrainMaster® Atlantis II two channel amp you will need to select 12 Point Mini**



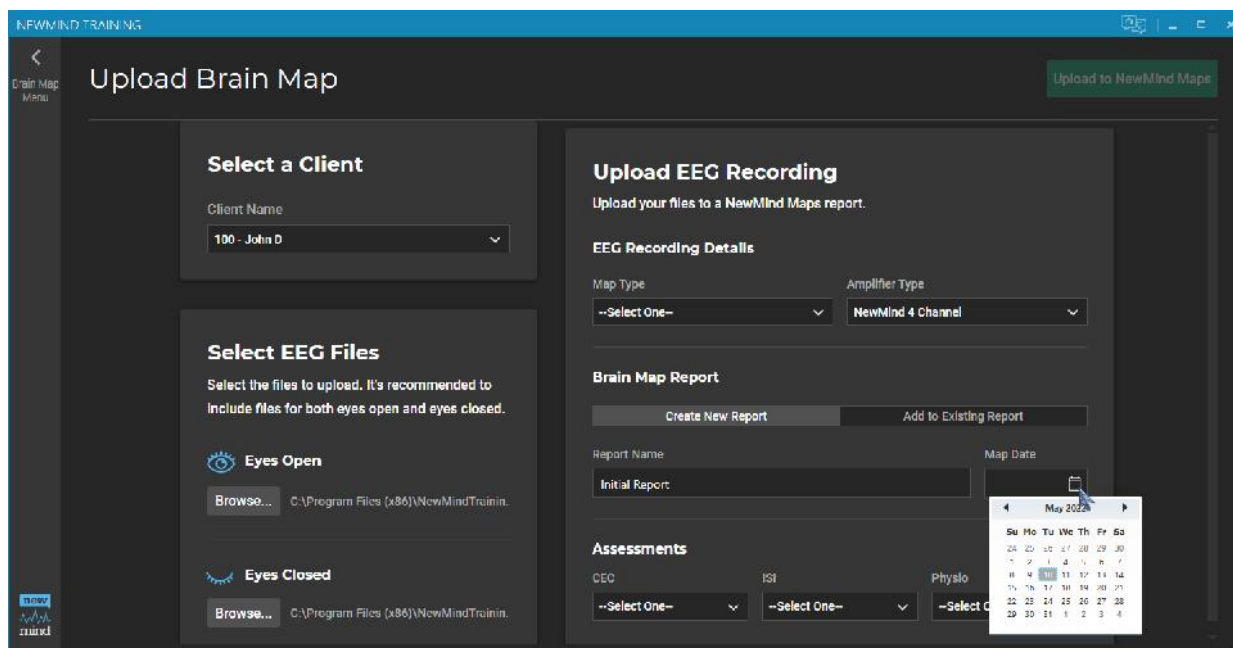
Select the “Amplifier Type” from the drop down list.



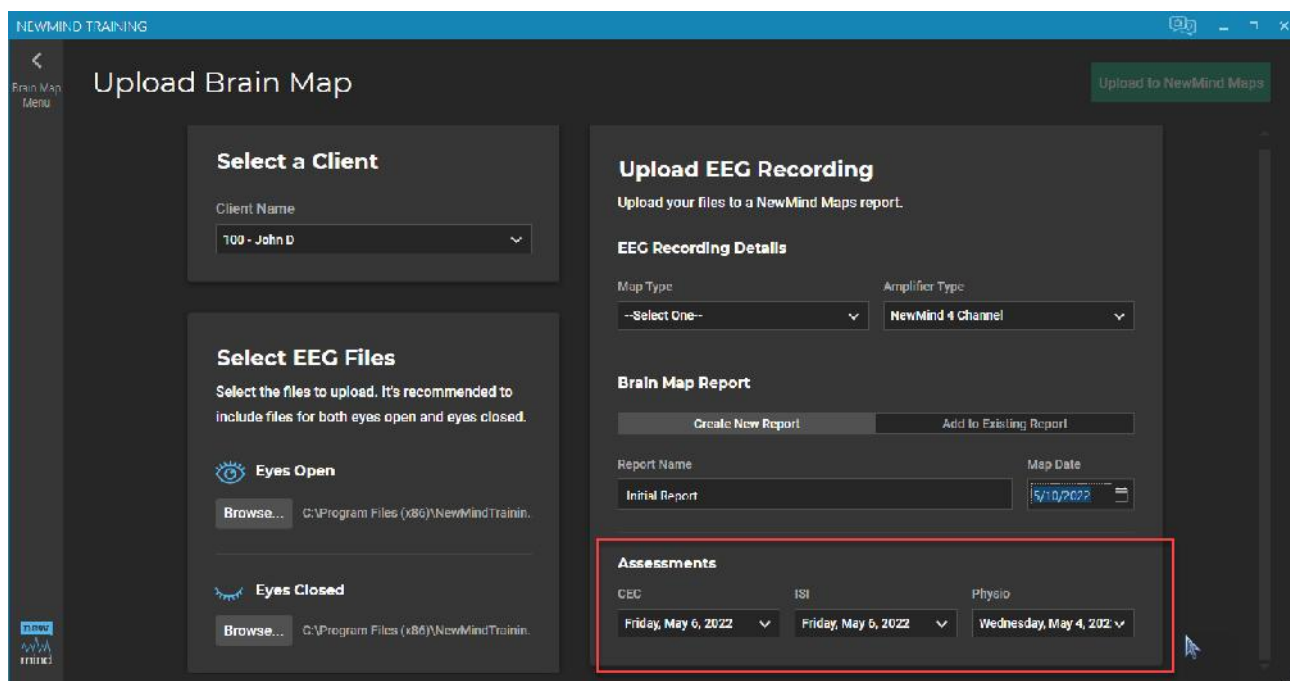
Enter the “Report Name”. This can be anything you choose to help you remember which qEEG recording it is. It could be Initial Report, Baseline, 1st map, 2nd Map, etc.



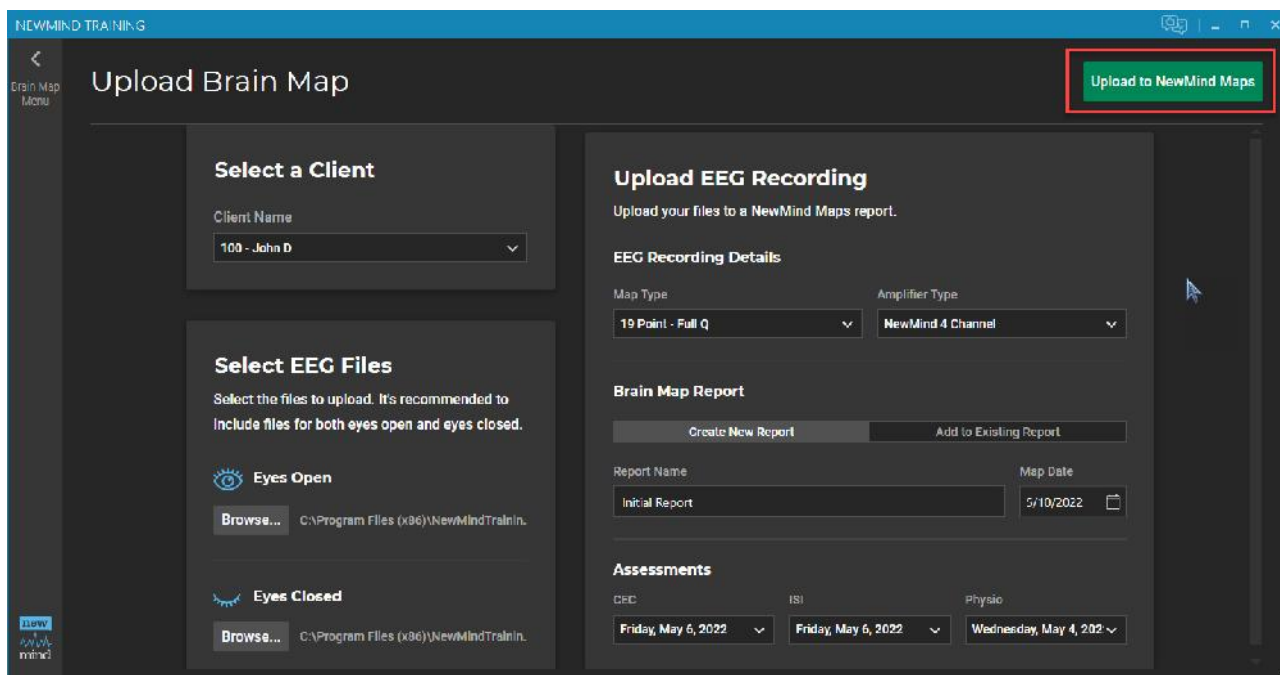
Select the "Map Date"



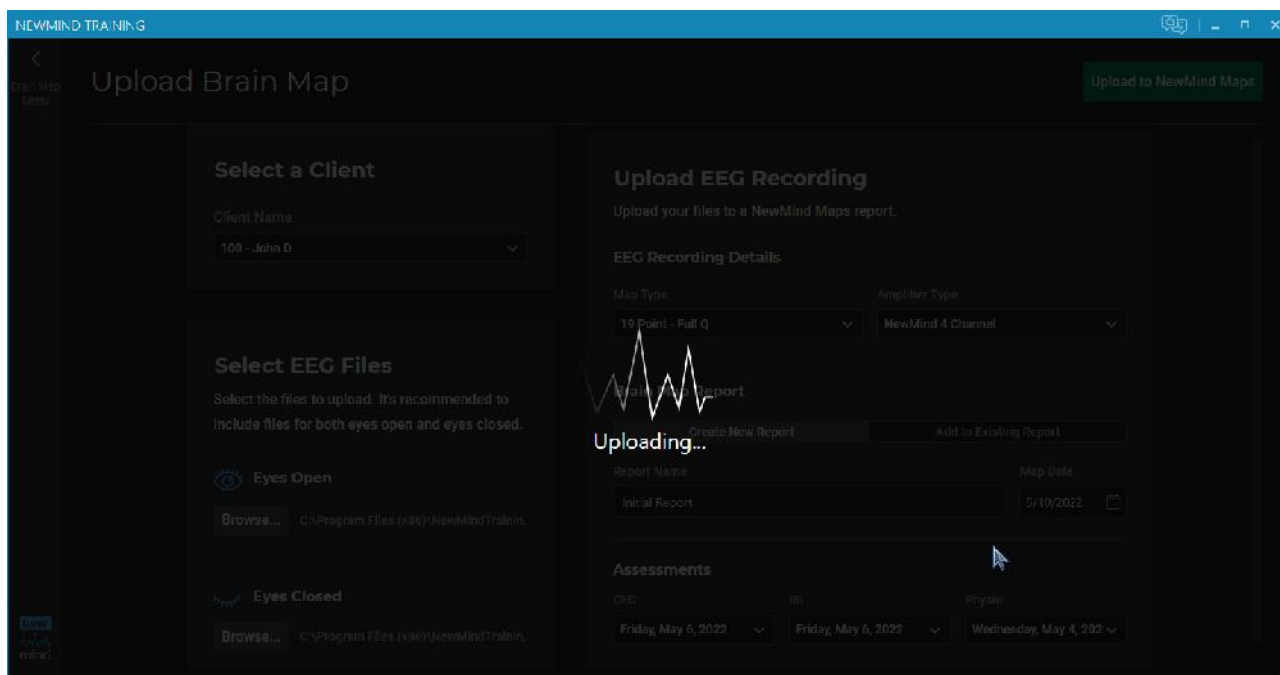
Then select the dates for the *CEC*, *ISI* and *Physio* if the client / patient has completed all these questionnaires online before being mapped



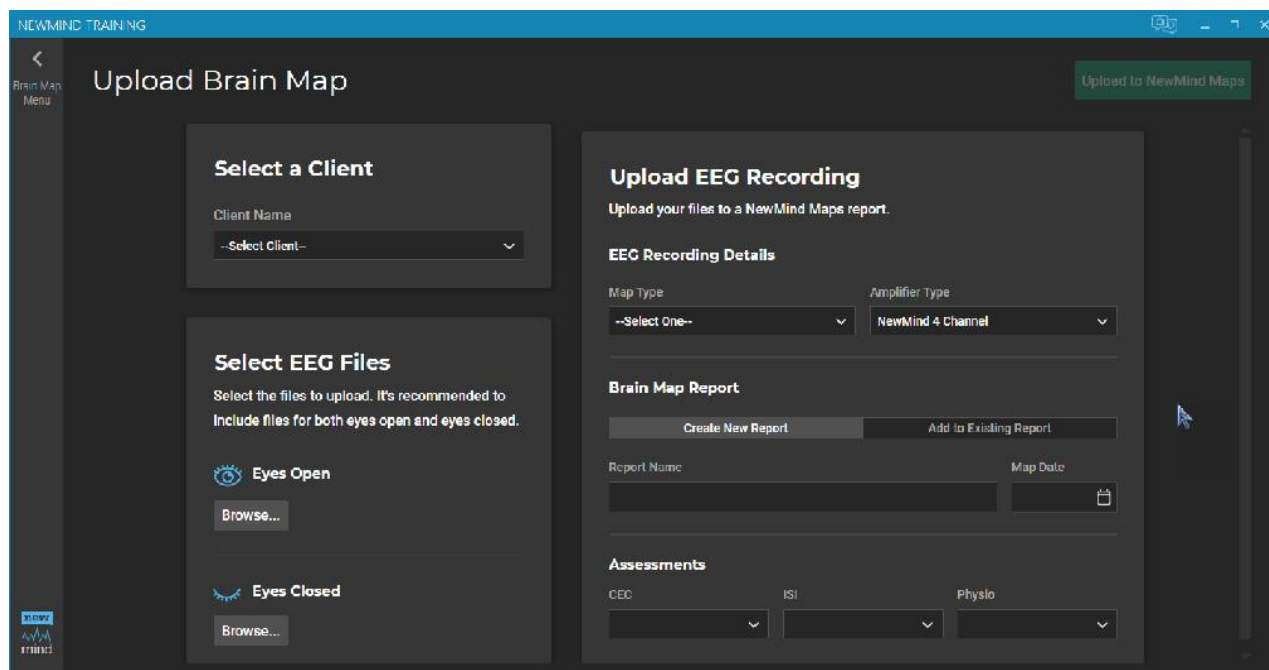
Click on “Upload to NewMind Maps” in the upper right corner



The following screen will appear.



When the upload is complete it will return back to a blank upload page as shown below. If you need to upload any other eeg recording you can do so by following the instructions above.



Then Log into your New Mind Maps account and view the map.

Uploading a Map to an EXISTING Report.

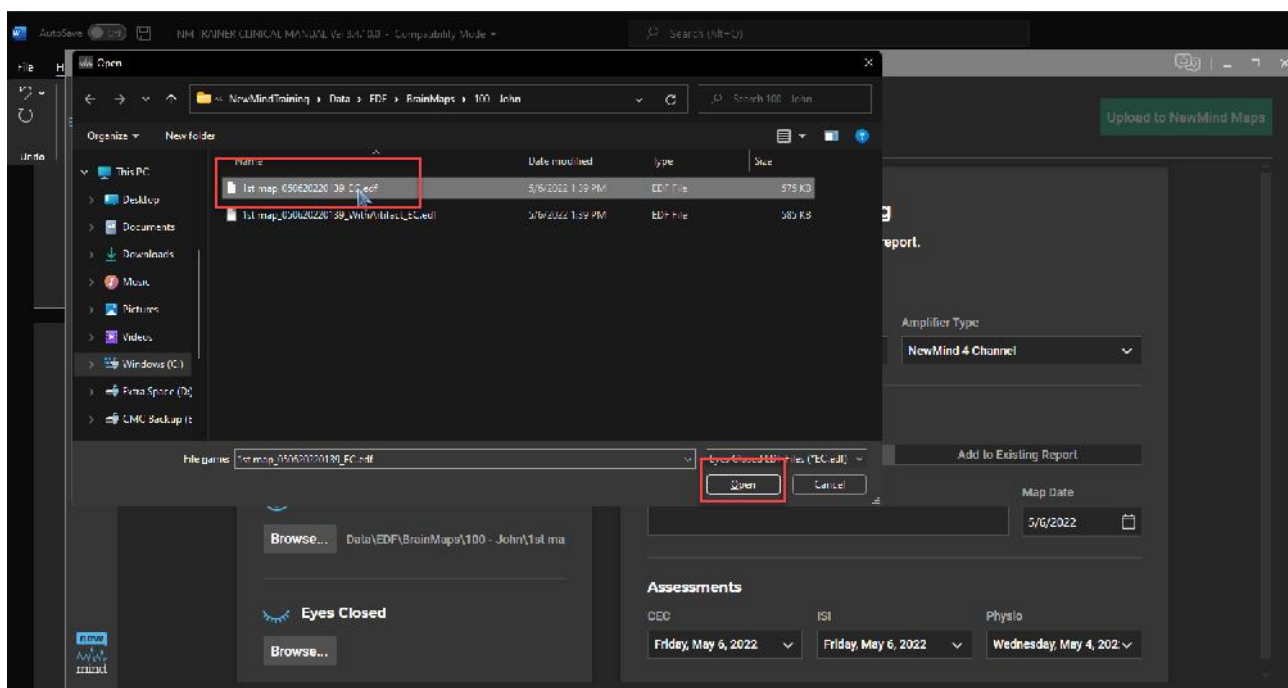
In some cases you may have conducted an Eyes Closed Map and uploaded the Eyes Closed data and then gone back to do an Eyes Opened Map (or vice versa), and now you want to upload the second map. When you click on *Upload Another Brain Map* the following screen appears

The screenshot shows the 'Upload Brain Map' window. The 'Select a Client' section has a dropdown menu currently showing '--Select Client--'. The 'Select EEG Files' section has two 'Browse...' buttons under 'Eyes Open' and 'Eyes Closed'. The 'Upload EEG Recording' section has 'Map Type' set to '--Select One--' and 'Amplifier Type' set to 'NewMind 4 Channel'. The 'Brain Map Report' section has 'Create New Report' and 'Add to Existing Report' buttons. The 'Assessments' section has three dropdowns for 'CEC', 'ISI', and 'Physio', all currently showing '--Select One--'. A green button 'Upload to NewMind Maps' is in the top right corner.

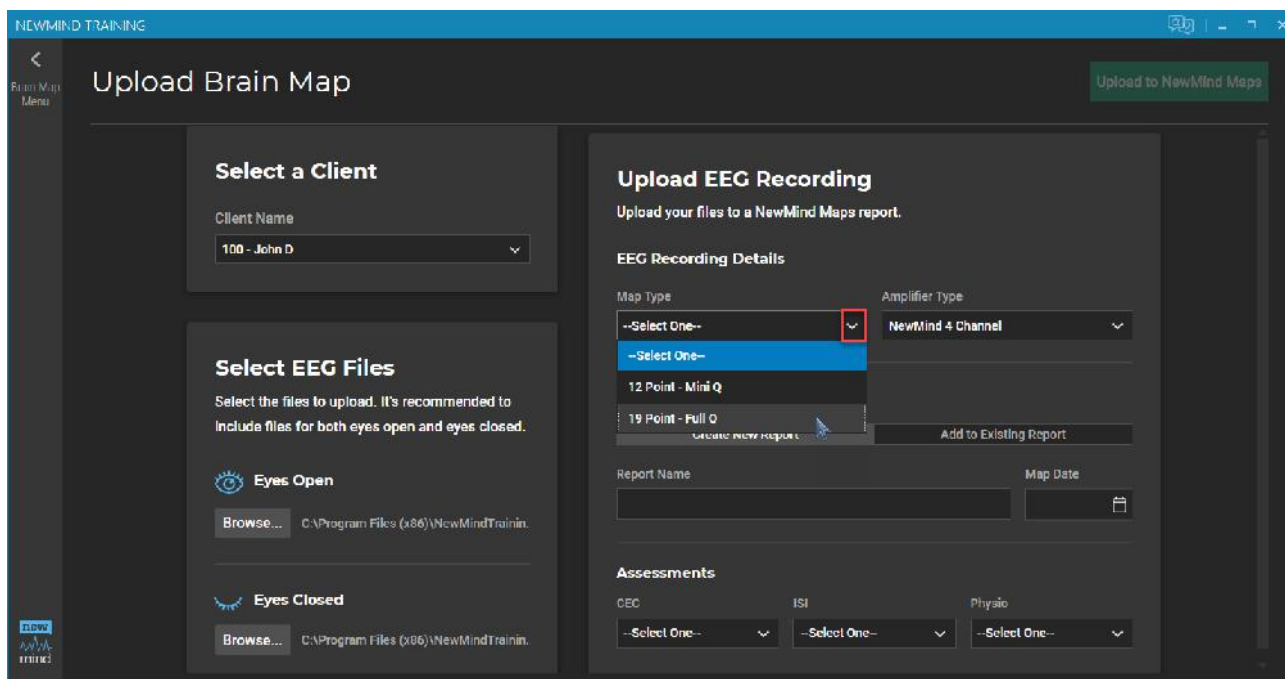
Select Client

This screenshot is identical to the previous one, but the 'Select a Client' dropdown menu is highlighted with a red box. The dropdown menu now shows '100 - John D'.

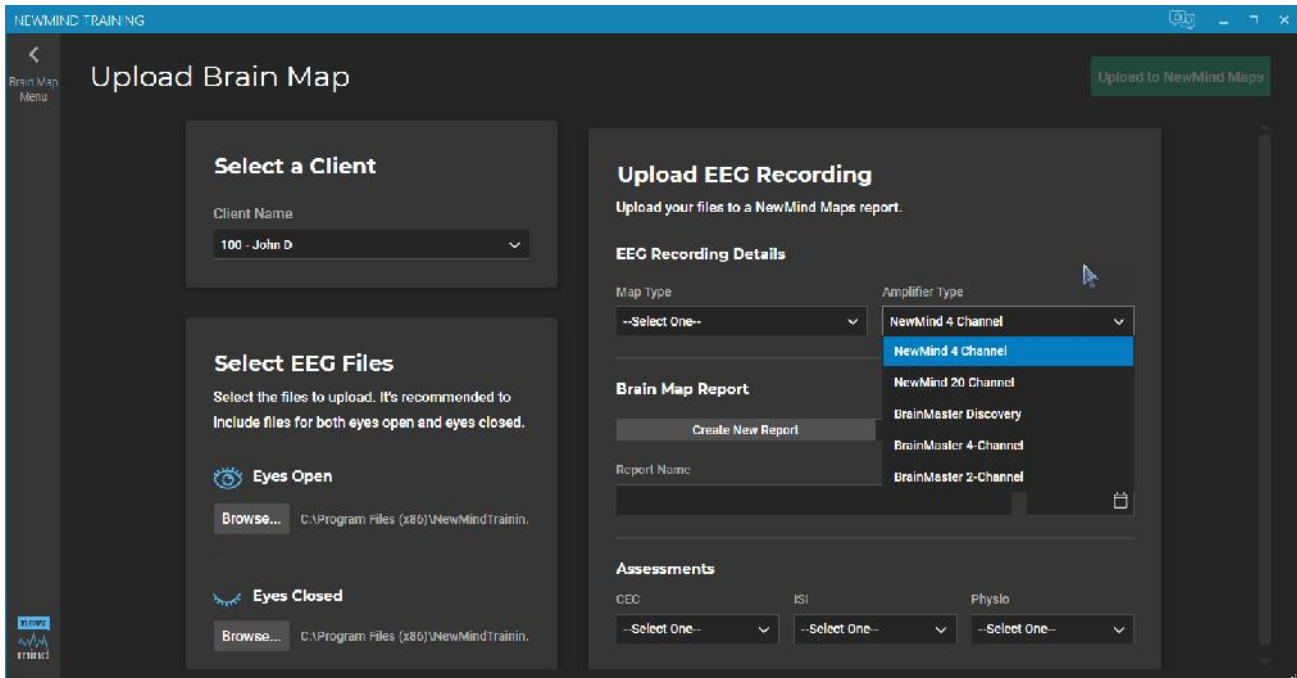
If you have already uploaded the Eyes Closed map, **select Browse under Eyes Opened Map or vice versa.**



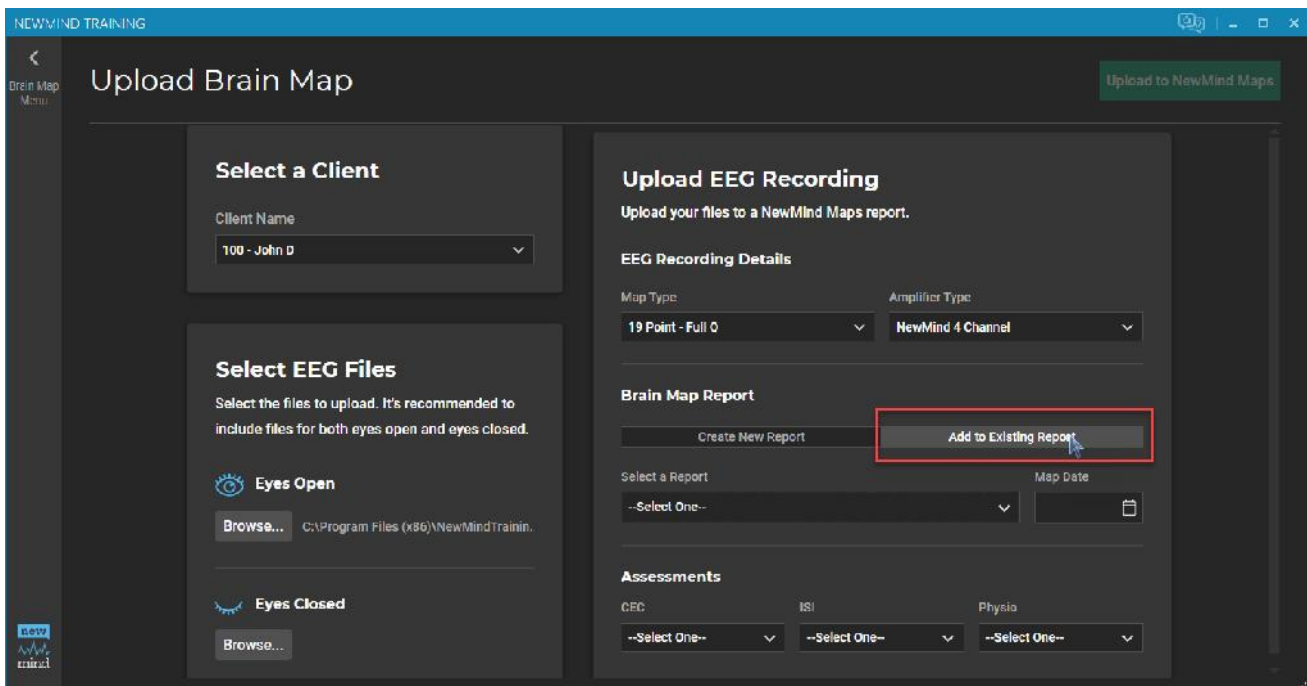
Select Map Type



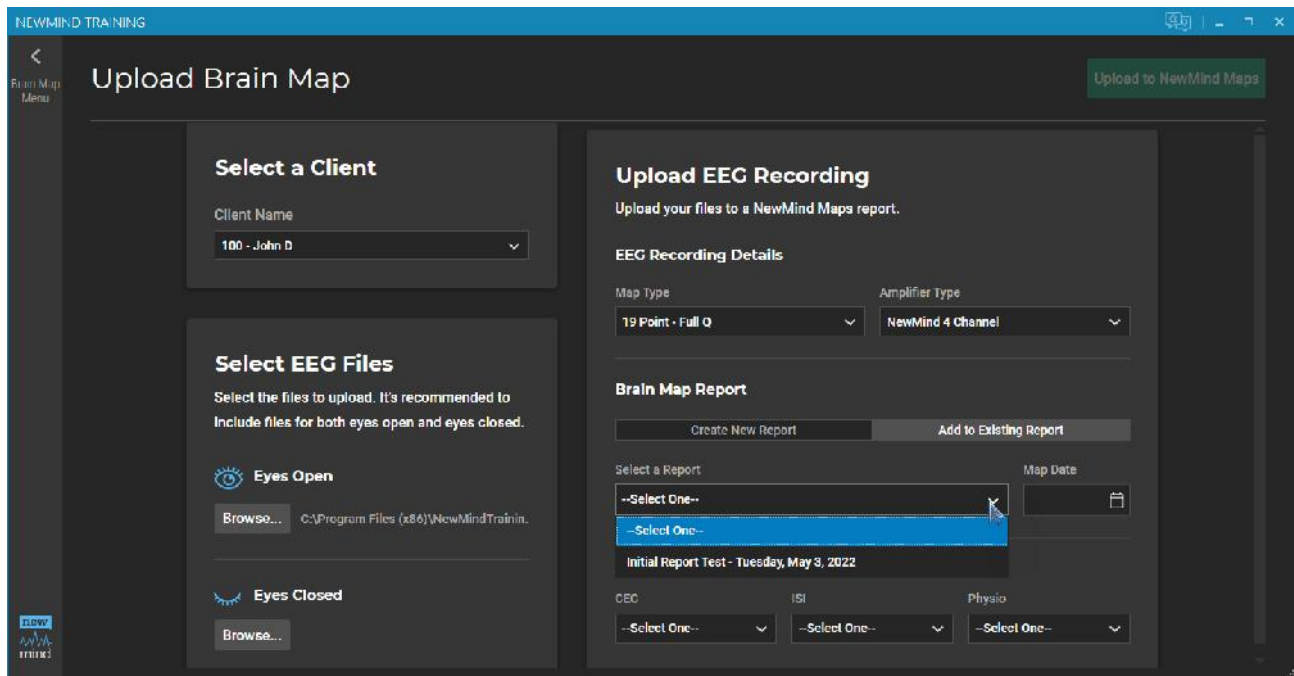
Select Amplifier Type



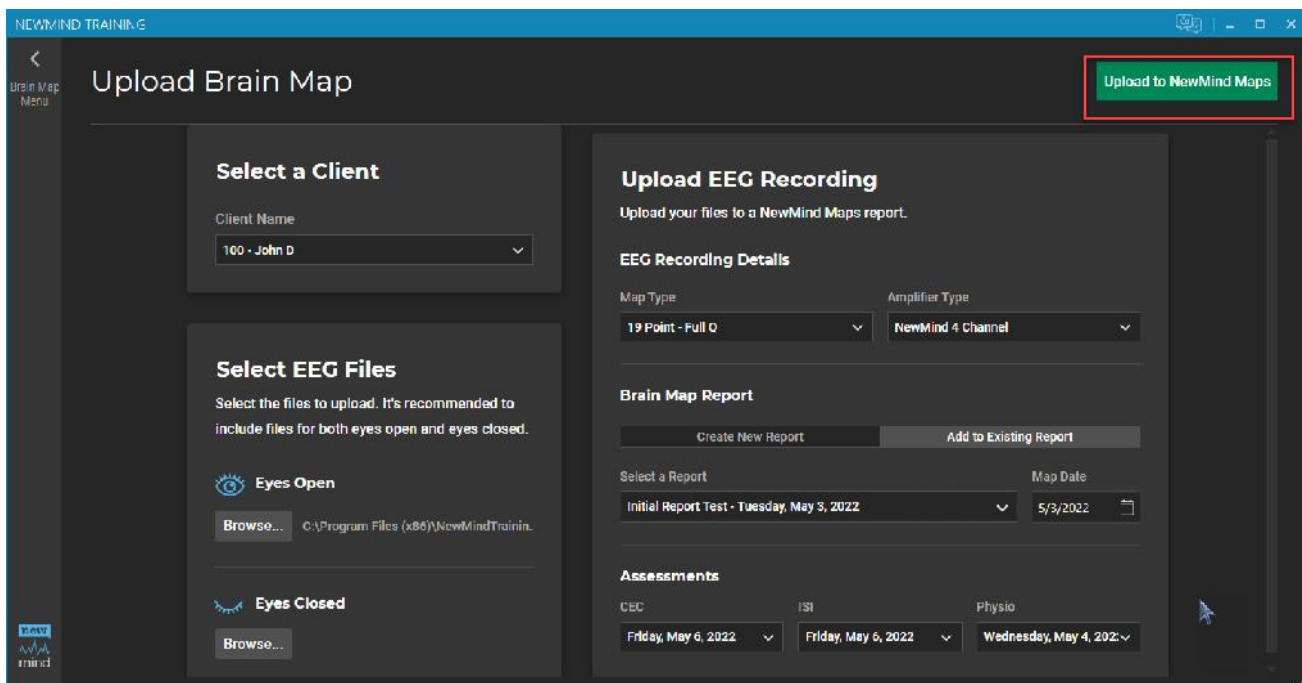
Select Add to Existing Report



Select the Report you wish to upload the qEEG record to.



Click on *Upload to NewMind Maps*.



After the upload is complete and the software returns to the blank upload screen.

Log into your NewMind Maps account and select the client / patient the map was uploaded to. Click on the *Brain Maps* tab, and you will see the map you have just uploaded.

Before Upload

John Doe
Age: 57 | Male

Client Number: 100
Client Status: A

Profile | Physiology | ISI | CEC | Cognitive | **Brain Maps** | Training Sessions | Progress Tracking | Client Login

Brain Map Reports

Current list of QEEG Assessments. Use this screen to manage, add, view, and delete QEEG/Brainmap reports.

[+ Add EEG Set](#) [X Delete EEG Set\(s\)](#) [Brain Map Compare Tool](#) [EEG Edit Tool](#)

Delete	Configuration	Name	Map Date	Eyes Closed	Eyes Opened	Analysis Report
<input type="checkbox"/>	X Settings	Initial Report	5/10/2022	X Delete Map	X Delete Map	.ll View Report
<input type="checkbox"/>	X Settings	Initial Report Test	5/3/2022	Upload Map	X Delete Map	.ll View Report

After Upload

John Doe
Age: 57 | Male

Client Number: 100
Client Status: A

Profile | Physiology | ISI | CEC | Cognitive | **Brain Maps** | Training Sessions | Progress Tracking | Client Login

Brain Map Reports

Current list of QEEG Assessments. Use this screen to manage, add, view, and delete QEEG/Brainmap reports.

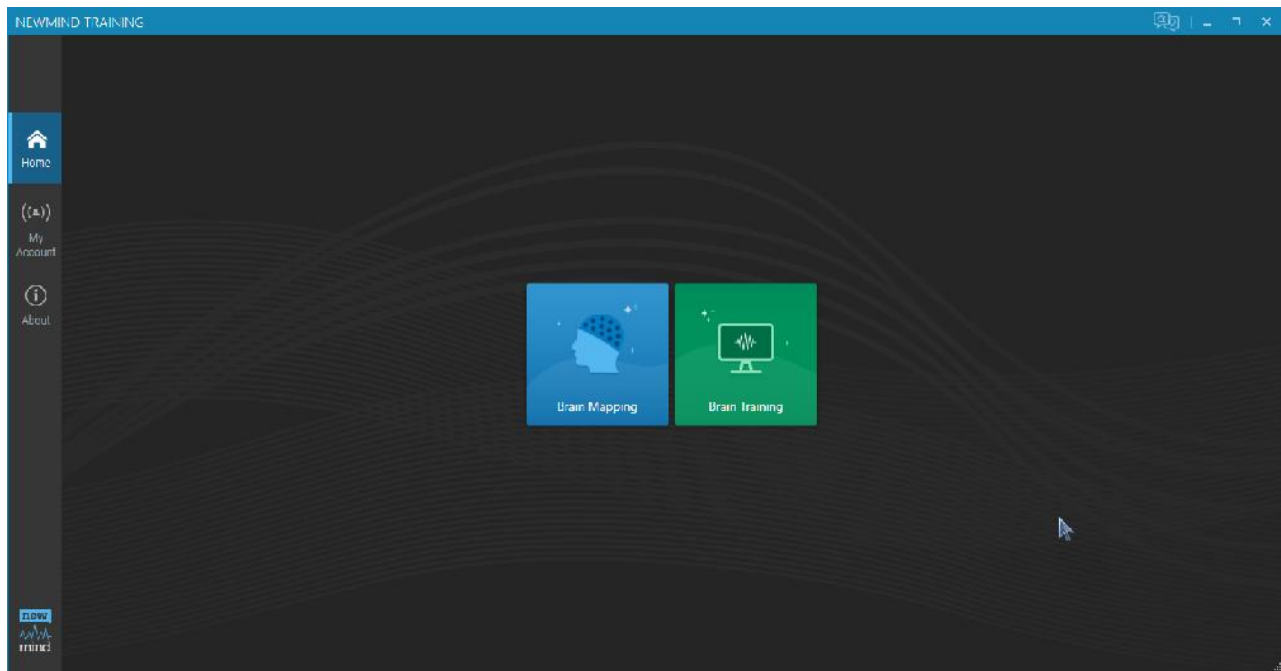
[+ Add EEG Set](#) [X Delete EEG Set\(s\)](#) [Brain Map Compare Tool](#) [EEG Edit Tool](#)

Delete	Configuration	Name	Map Date	Eyes Closed	Eyes Opened	Analysis Report
<input type="checkbox"/>	X Settings	Initial Report	5/10/2022	X Delete Map	X Delete Map	.ll View Report
<input type="checkbox"/>	X Settings	Initial Report Test	5/3/2022	X Delete Map	X Delete Map	.ll View Report

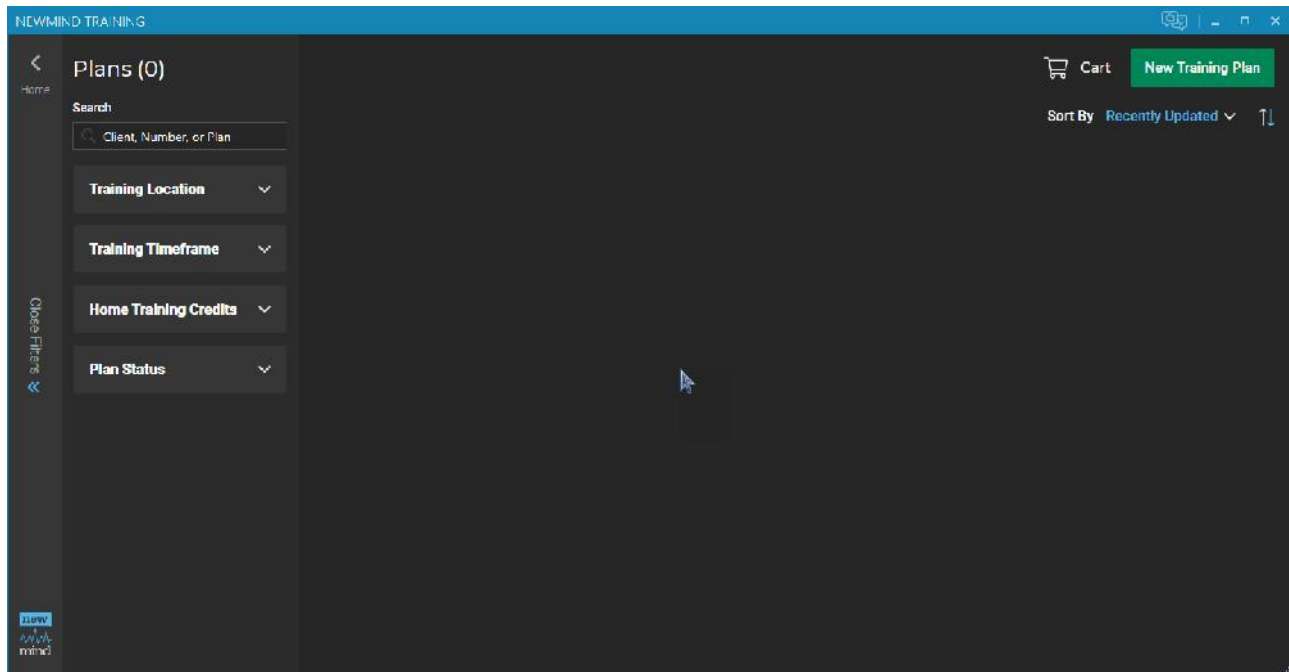
Part III—CREATING NEUROFEEDBACK TRAINING PLANS

Creating a One Channel Training Plan

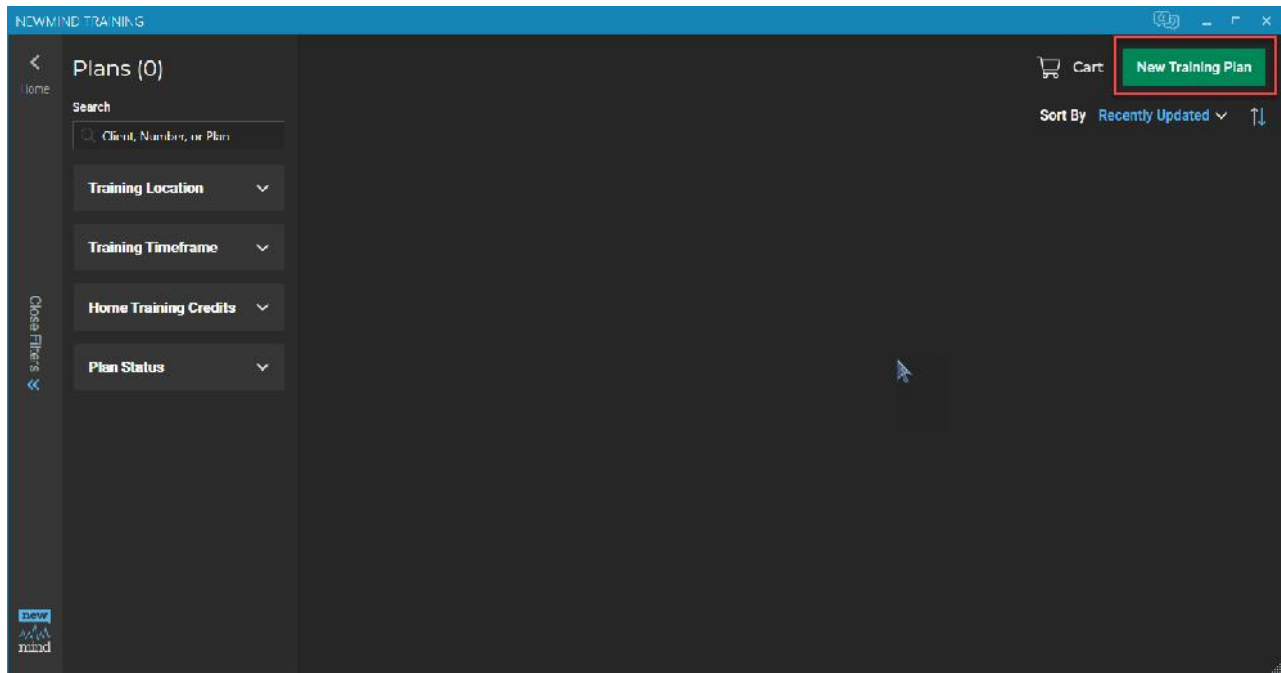
Starting from the home screen click on *Brain Training*



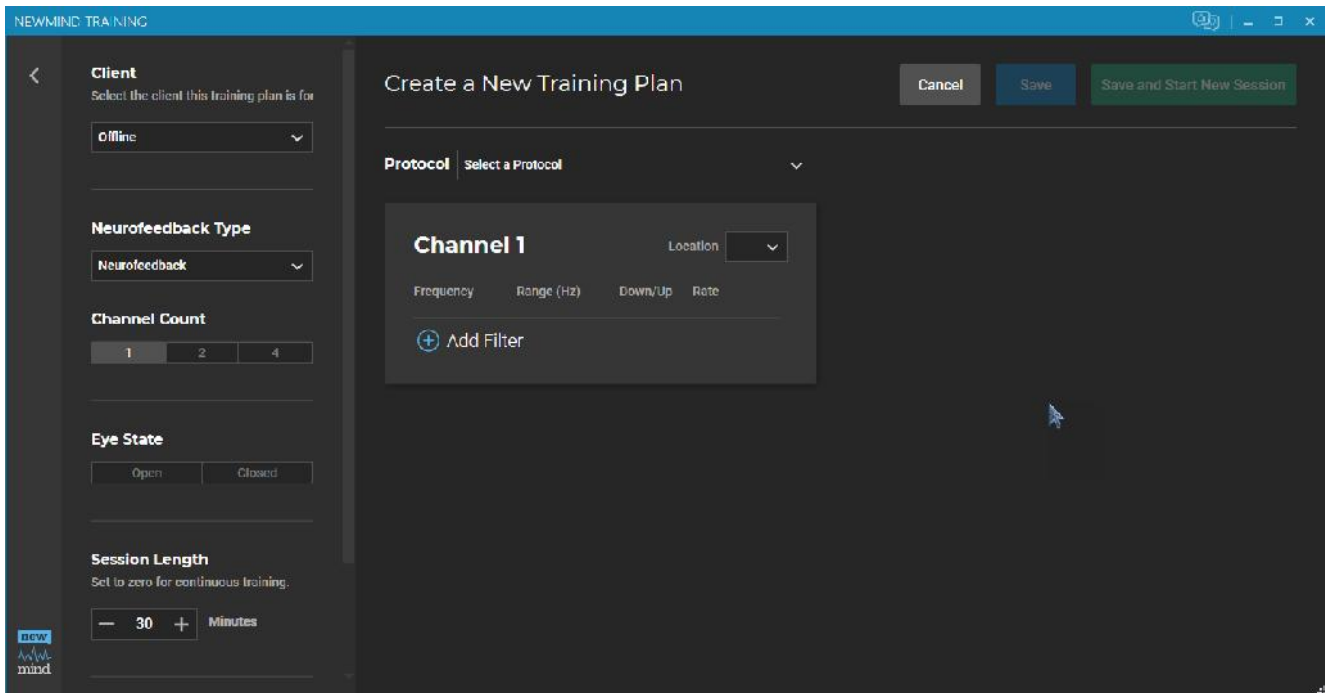
The following screen will appear.



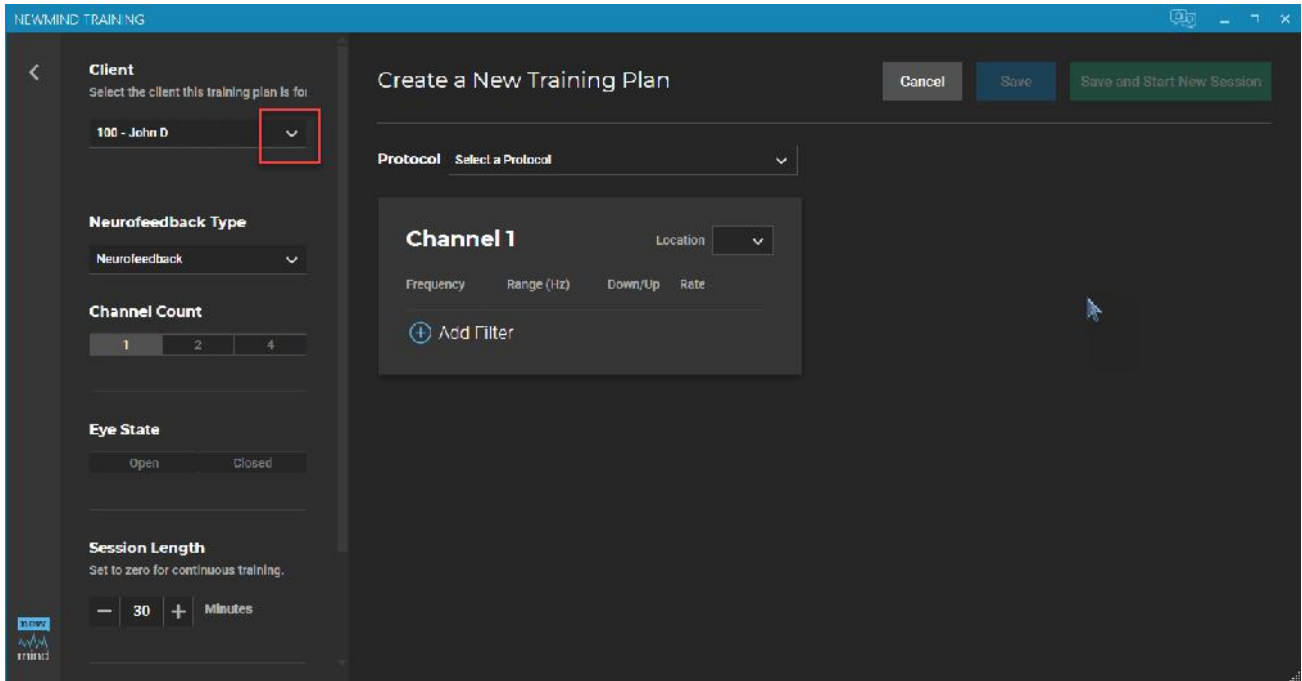
If you are creating a single channel protocol, **click on New Training Plan** in the upper right corner



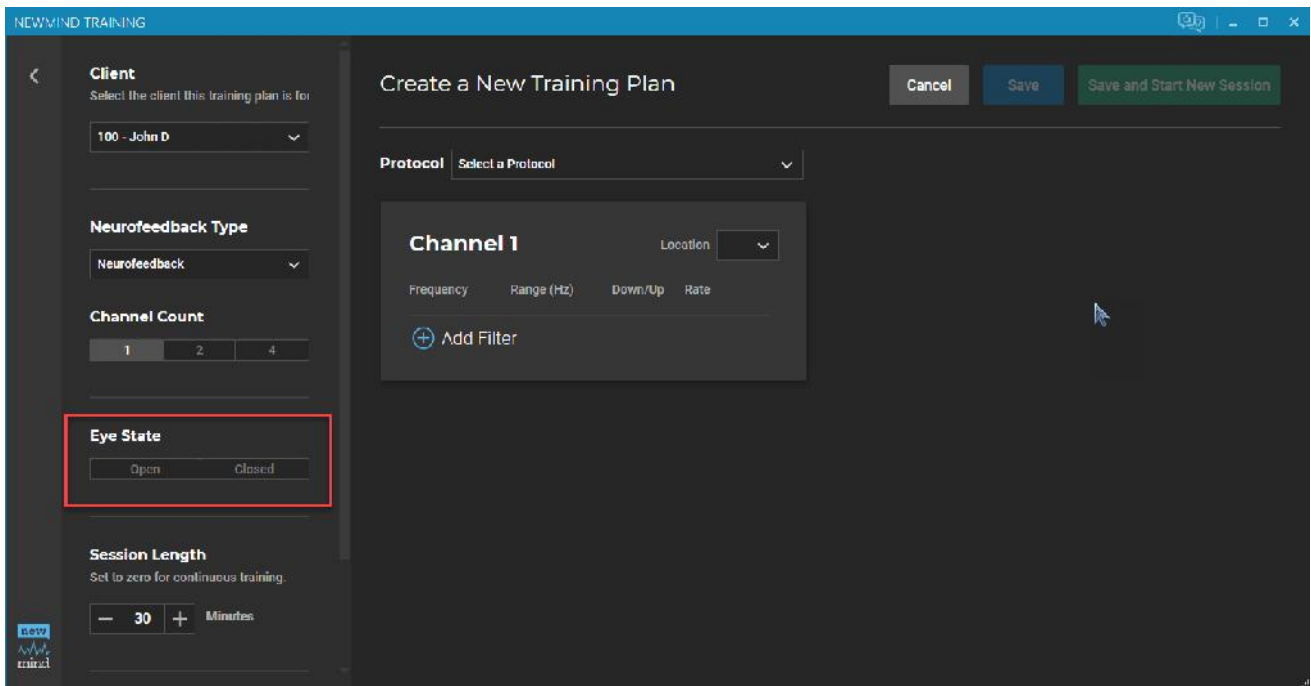
The screen below appears.



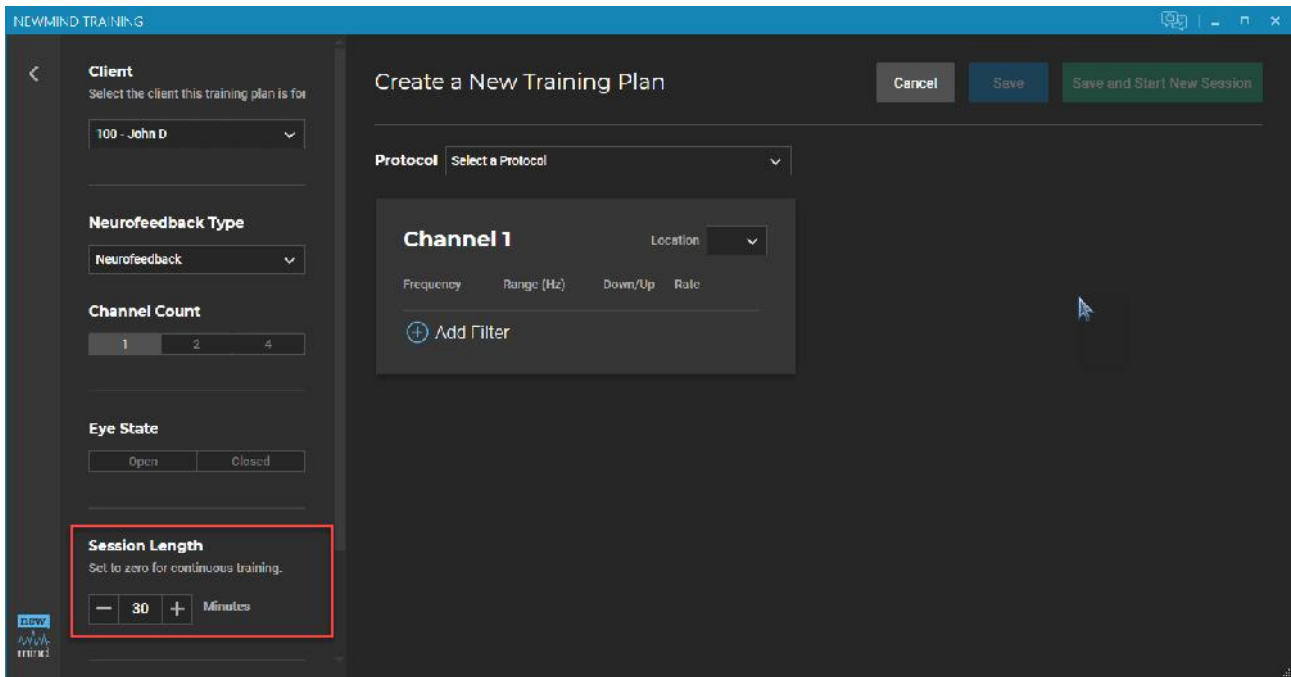
Start by assigning the training plan to one of your clients by using the drop down menu under the Client section.



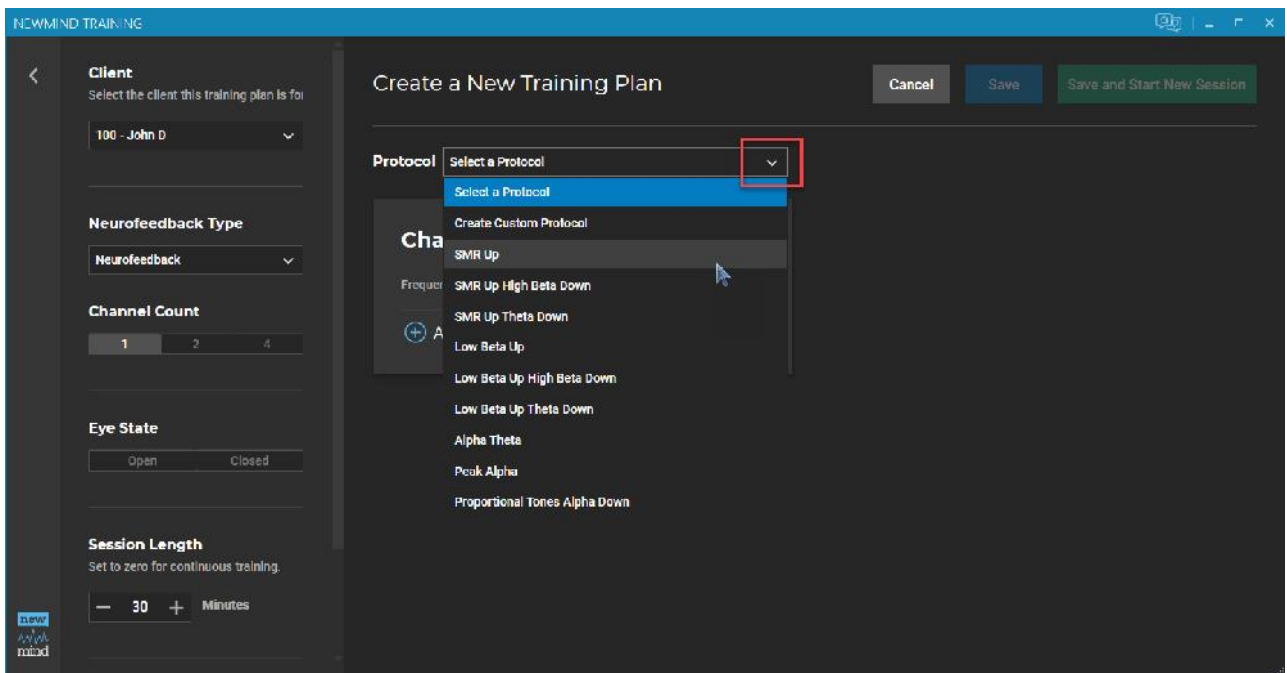
Select whether the client will be training in the eyes open or eyes closed.



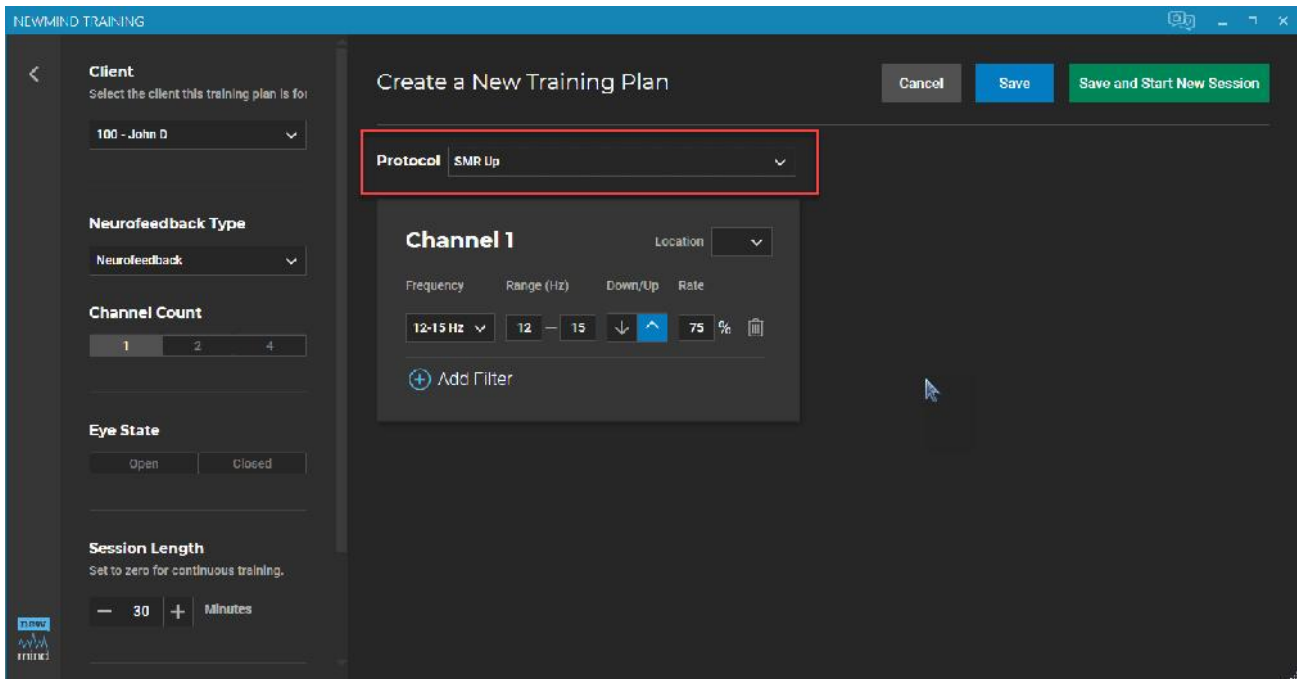
In the *Session Length* box, you can create how long the session will run and when it reaches the time set in minutes, the session will automatically stop. In the example below the *Session Length* was set for 30 minutes. **NOTE:** If you leave the *Session Length* at “0” the session will run indefinitely



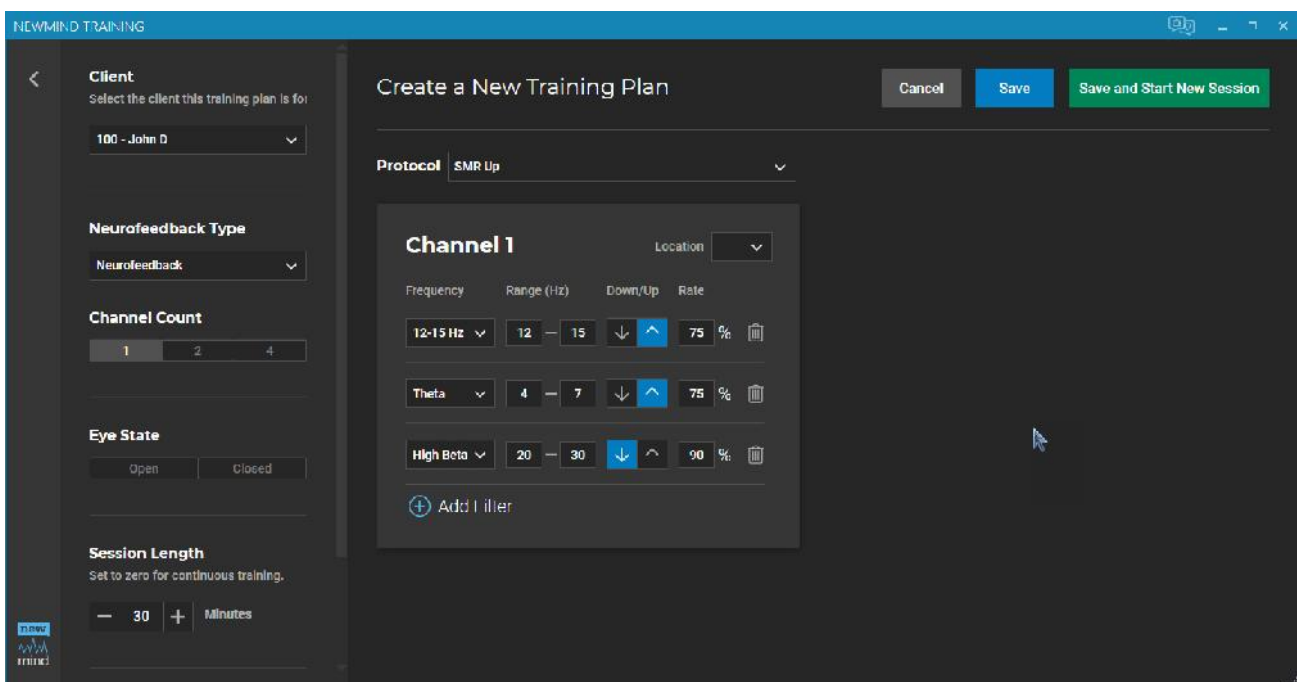
Where it says “*Protocol*” select from the drop-down list



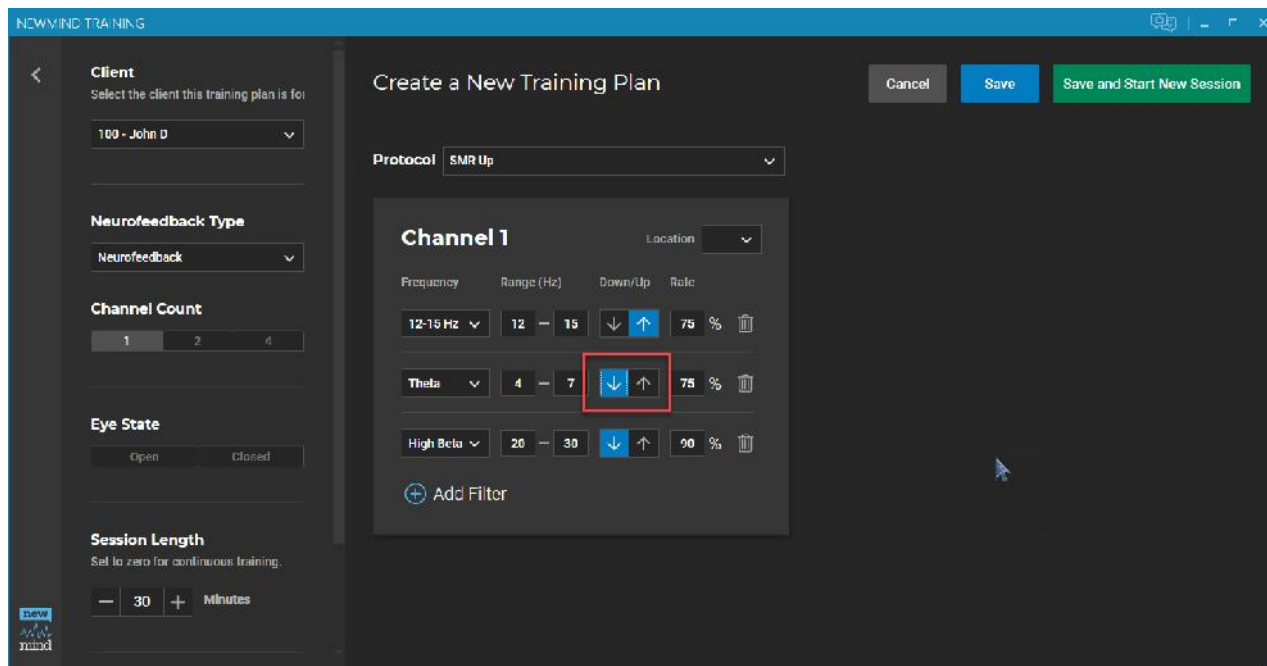
You will notice that in the *Training Plan Name* box on the left side of the screen; *SMR Up* now appears. You can add to or change this name to your preference (see next diagram).



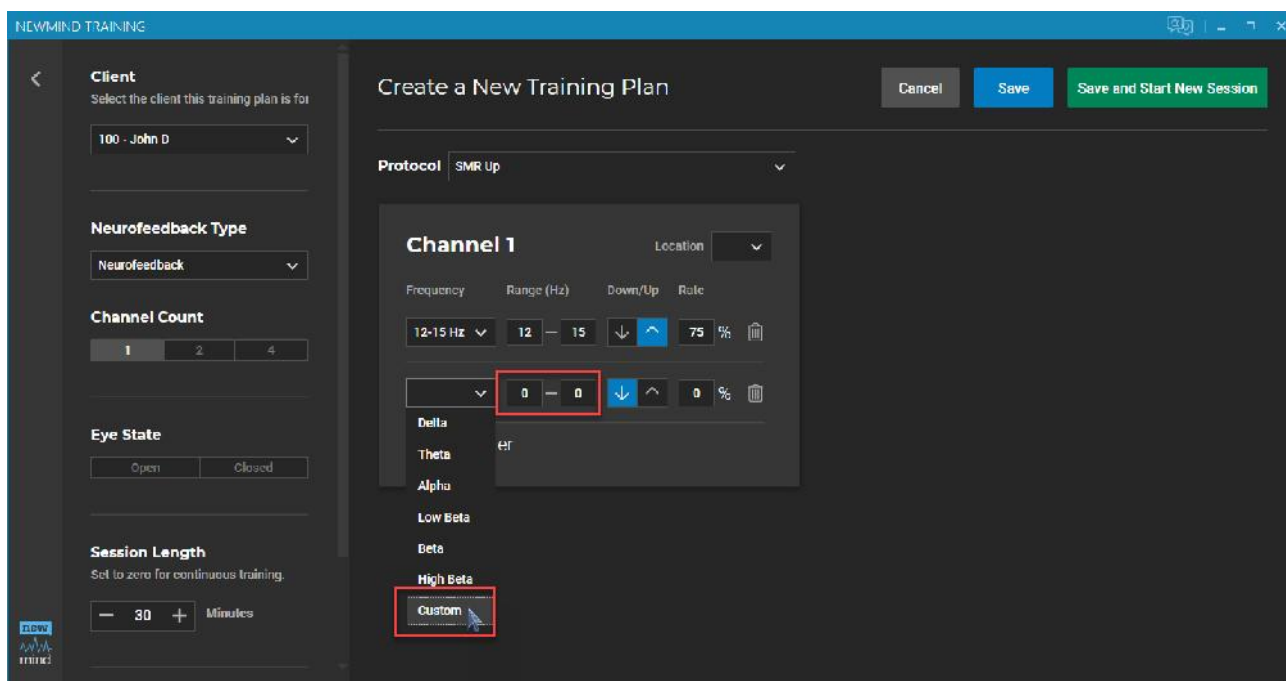
You can add specialized filters to this protocol. If you want to add another frequency band (e.g., High Beta Down) click on the green **Add Filter** tab under Channel 1 and select the filter(s) you wish to add. In the example below the filters 4-7 down and 20-30 down have been added



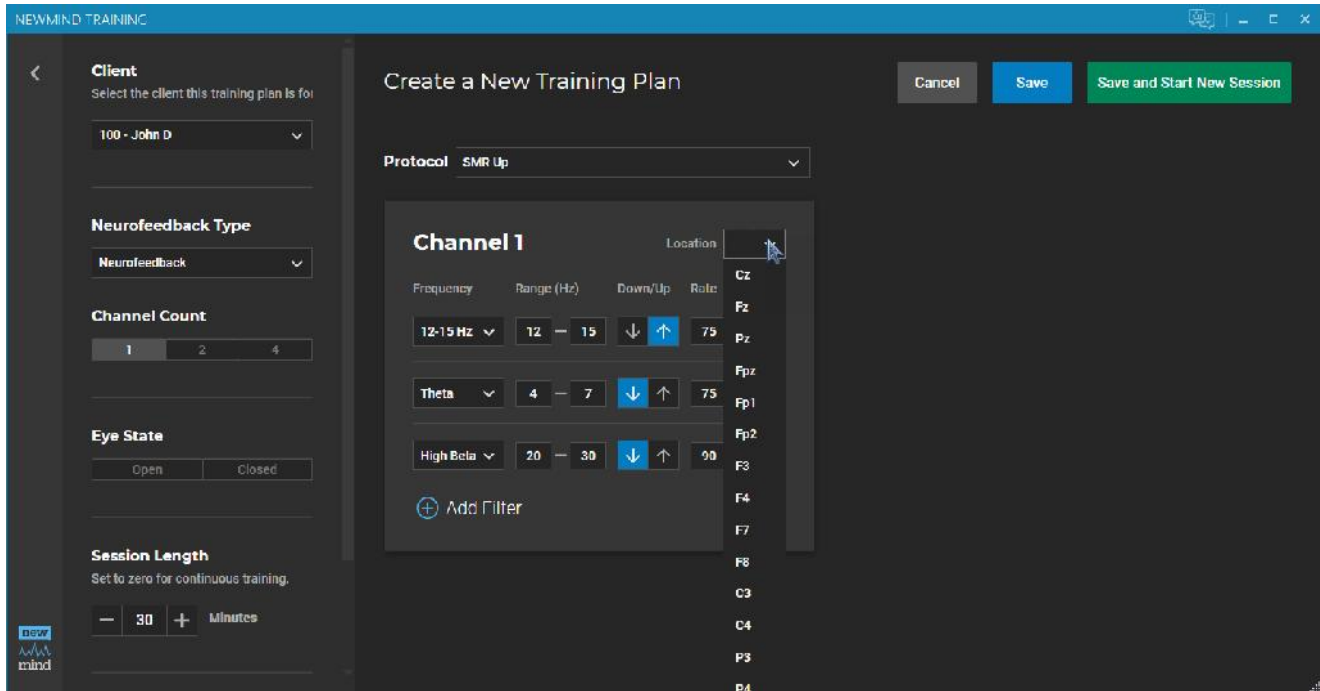
In the example above **Theta (4-7Hz)** was added. **NOTE:** Under the *Up/Down* column the green arrow is pointing up which would train up or enhance 4-7Hz. By clicking on the down arrow next to Theta, it is now being trained down



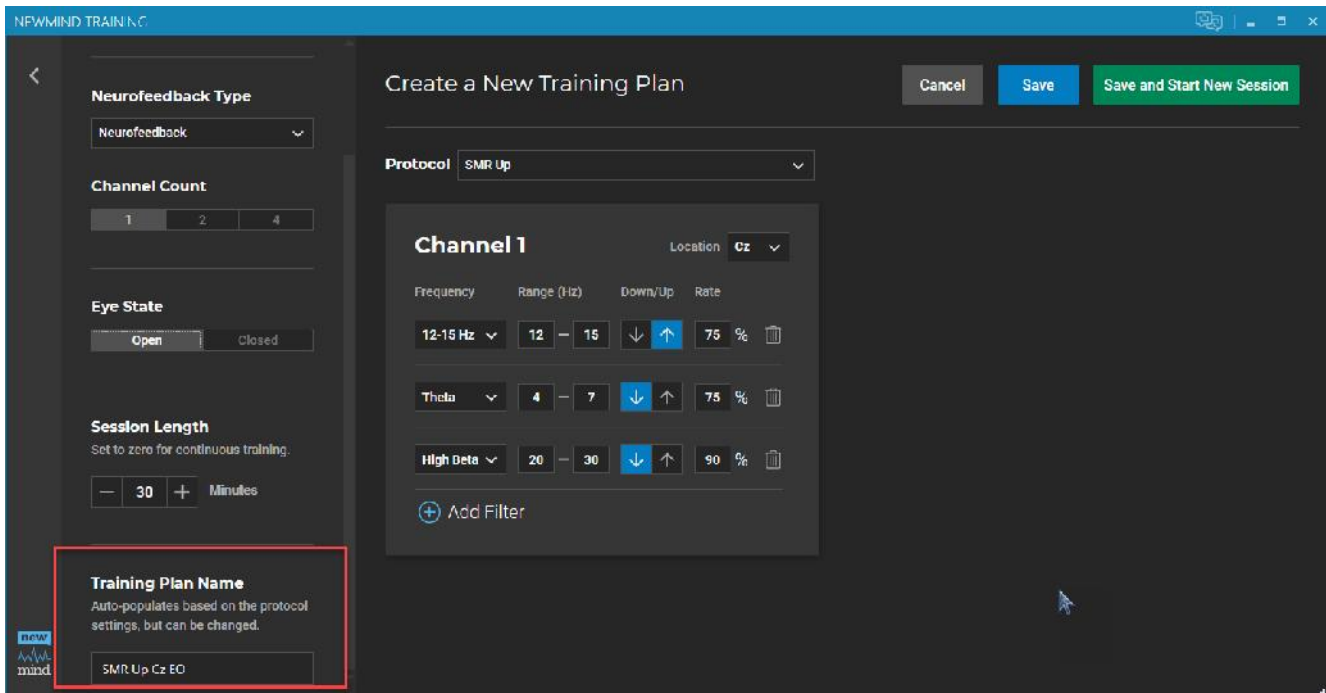
In the example above we have selected named component bands for the training filters. You also have the choice to add a custom frequency range by selecting the “Custom” option from the menu and then entering the frequencies you would like to train.



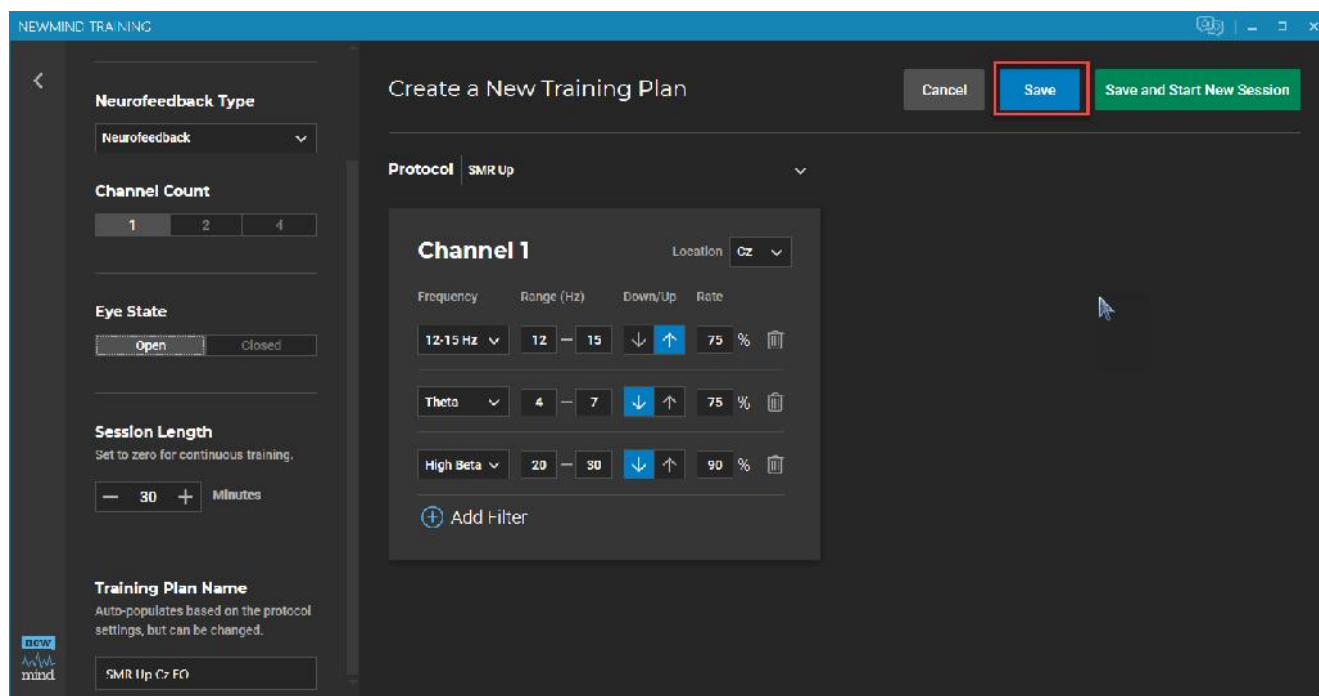
In the **Location** box select the location you wish to use, click on the arrow.



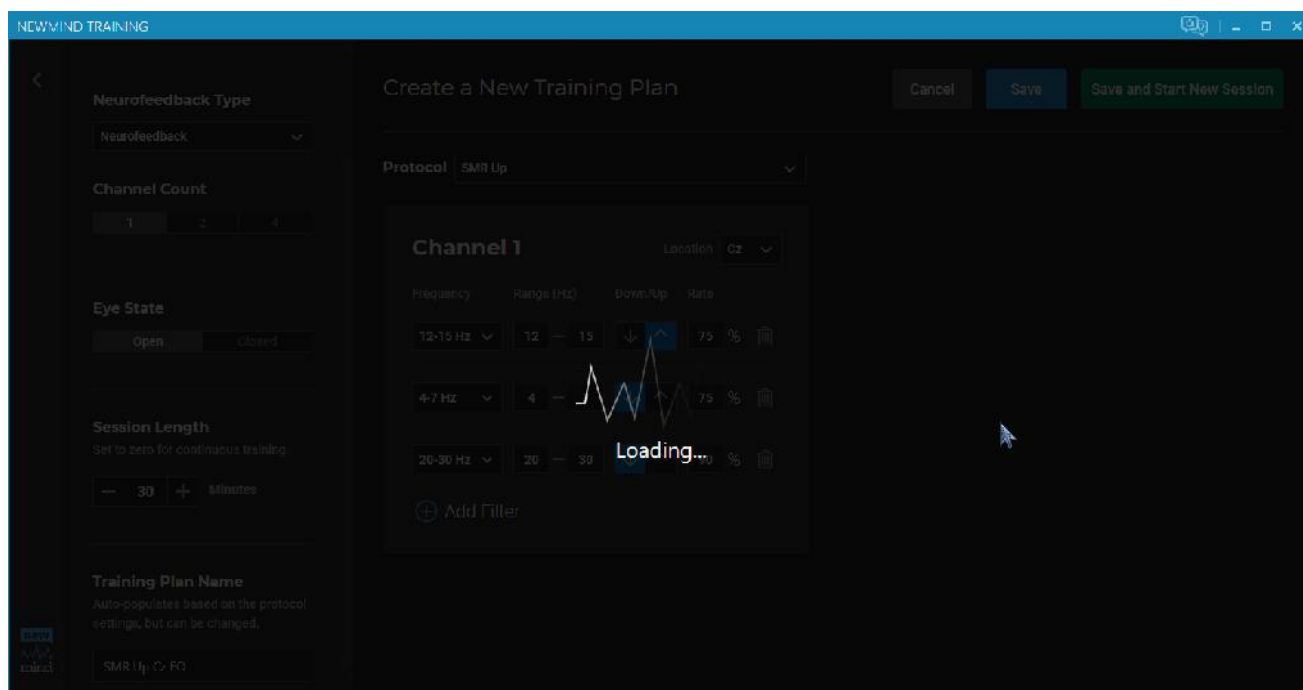
In the example below, *Cz* has been selected and the name under **Training Plan Name** has been changed to read *SMR Up EO*. *You have the option of keeping this training plan name or changing it to something else. The name will not effect the outcome of the protocol.*



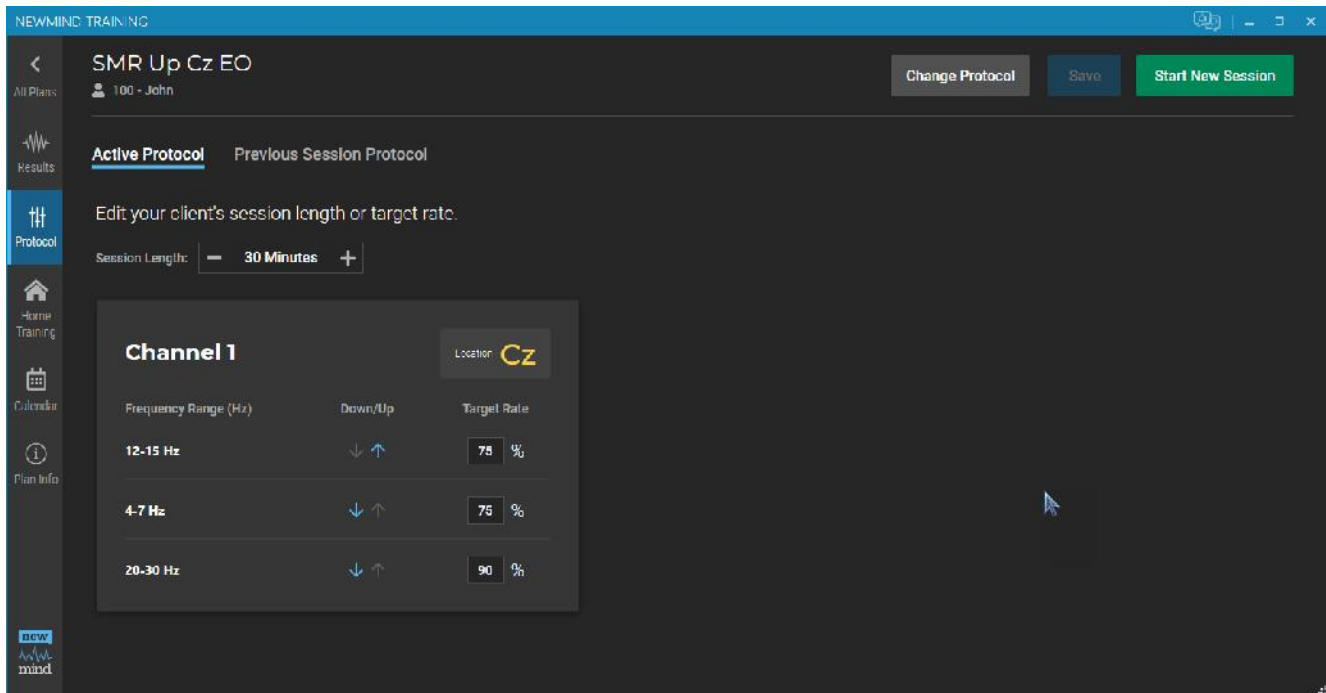
When you are satisfied with the training plan that you have created for the client click on the **Save** button



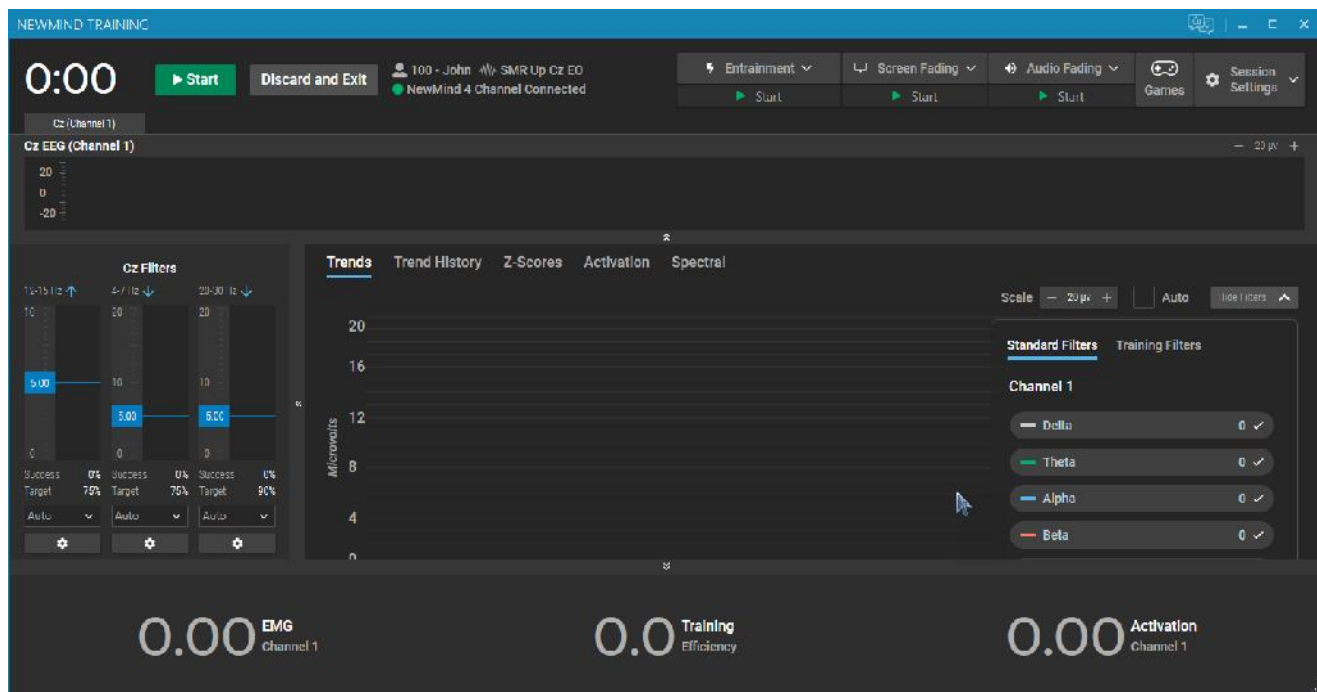
The following screen will appear while it is saving.



Once the training plan has been saved the following screen will appear.



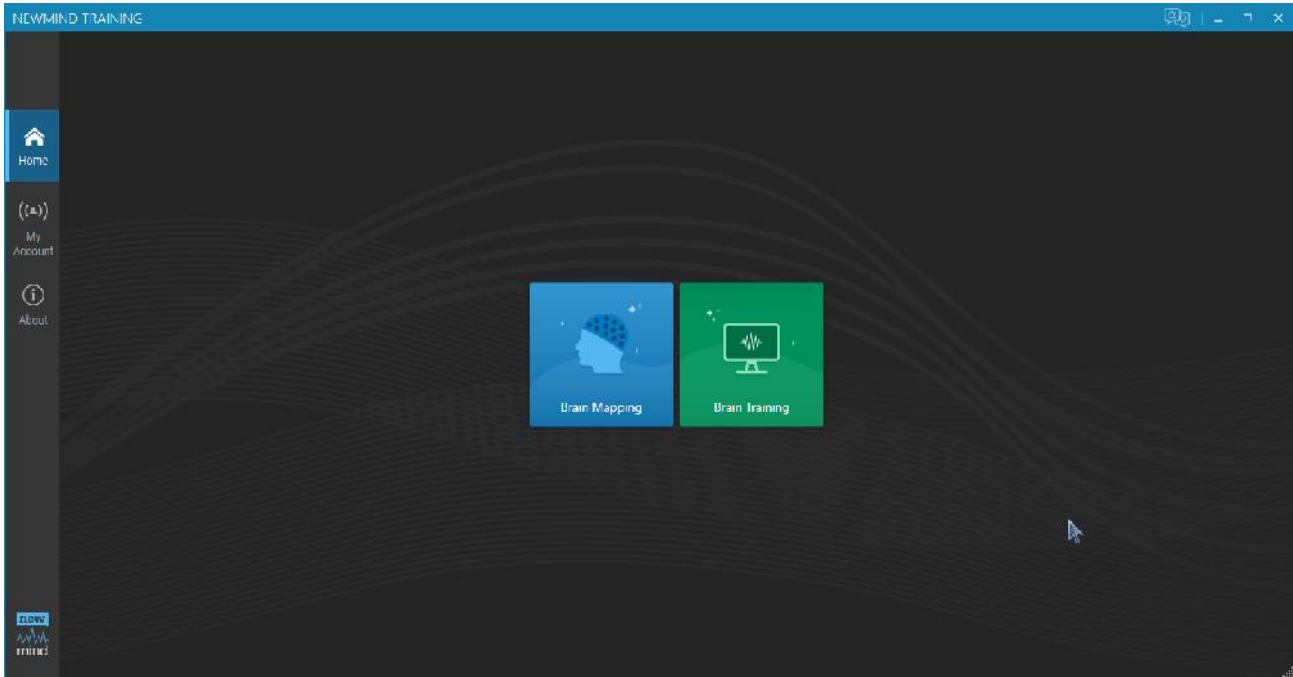
If you click on Start New Session the following screen will appear.



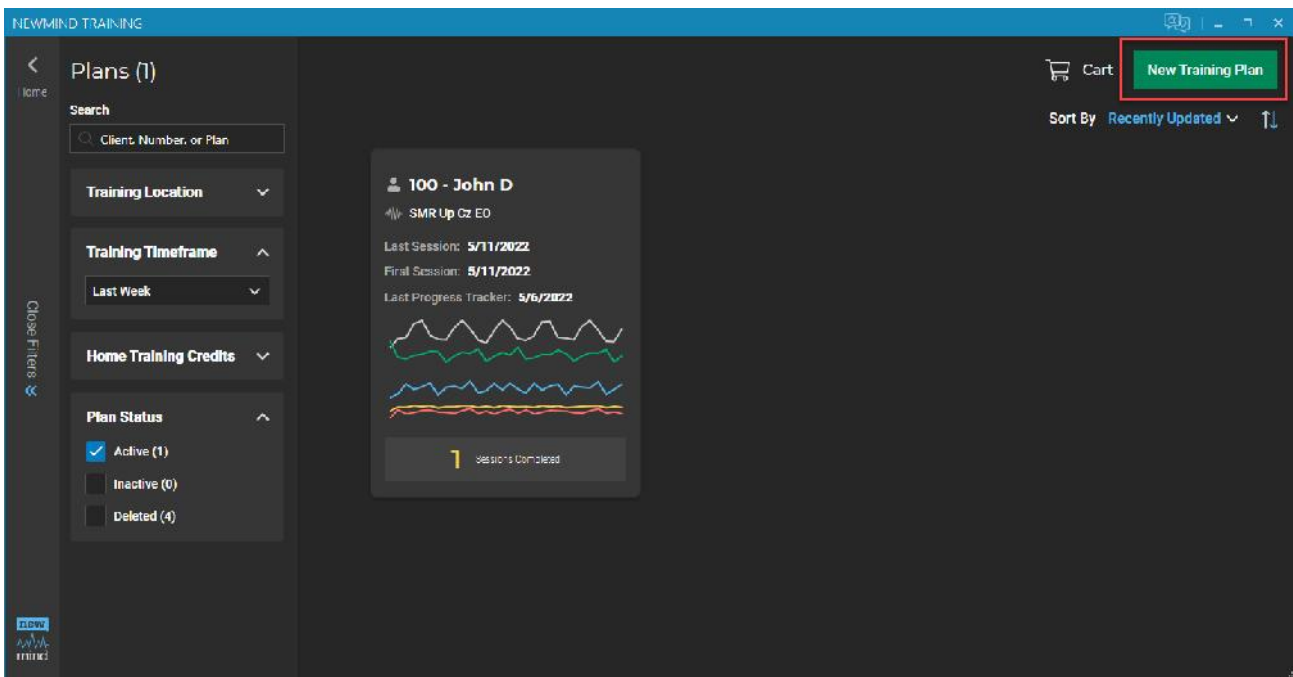
Creating a Two Channel Training Plan

NOTE: Creating a two-channel training protocol is very similar to creating a one channel protocol and most of the steps are the same.

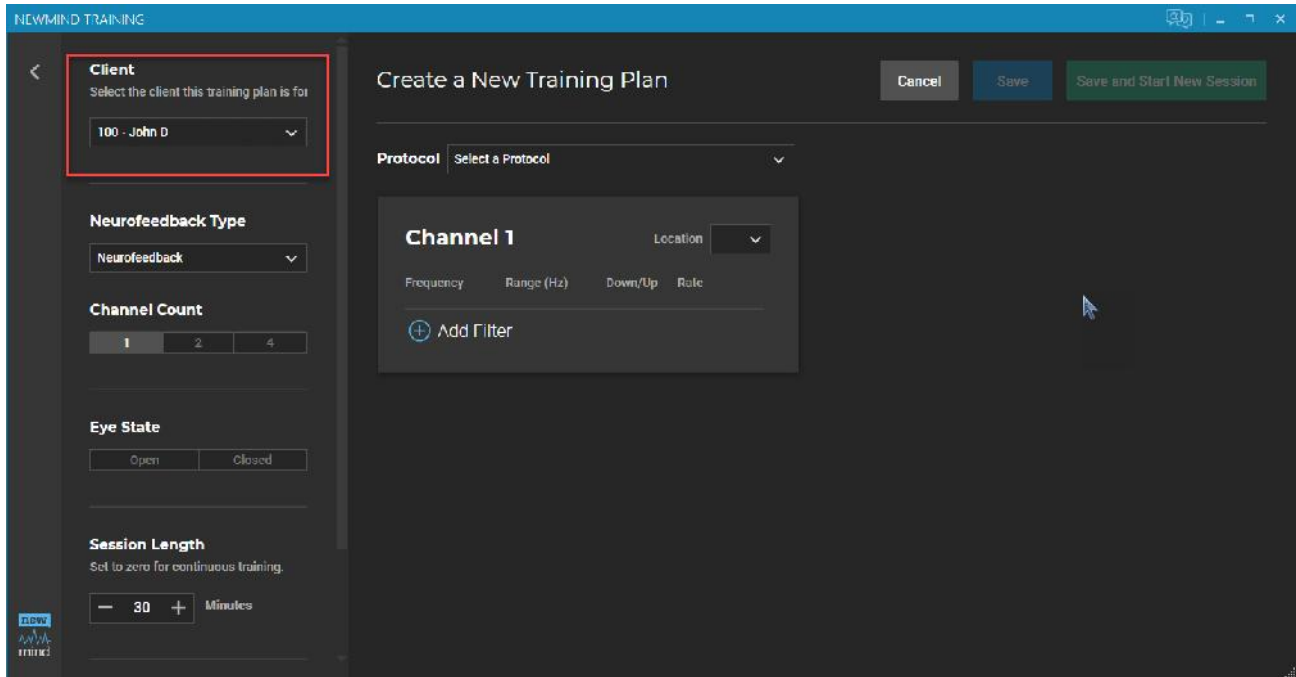
From the **HOME** Screen **click on Brain Training**.



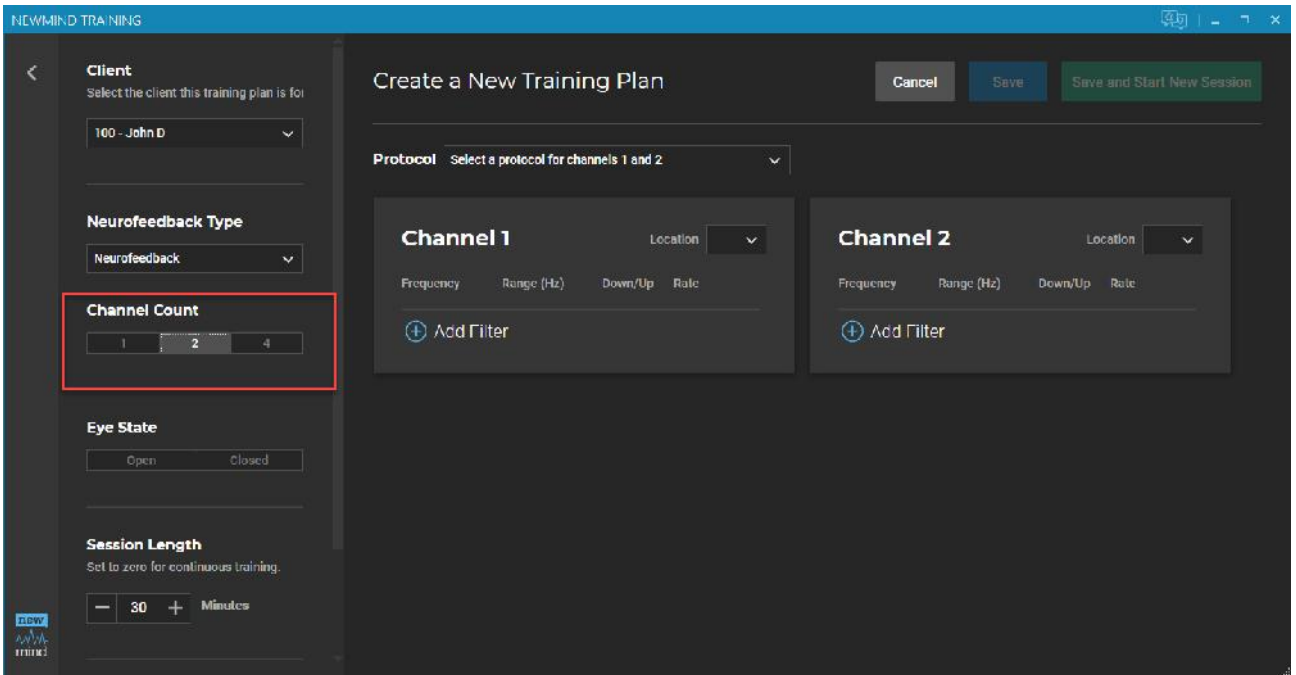
Click on New Training Plan



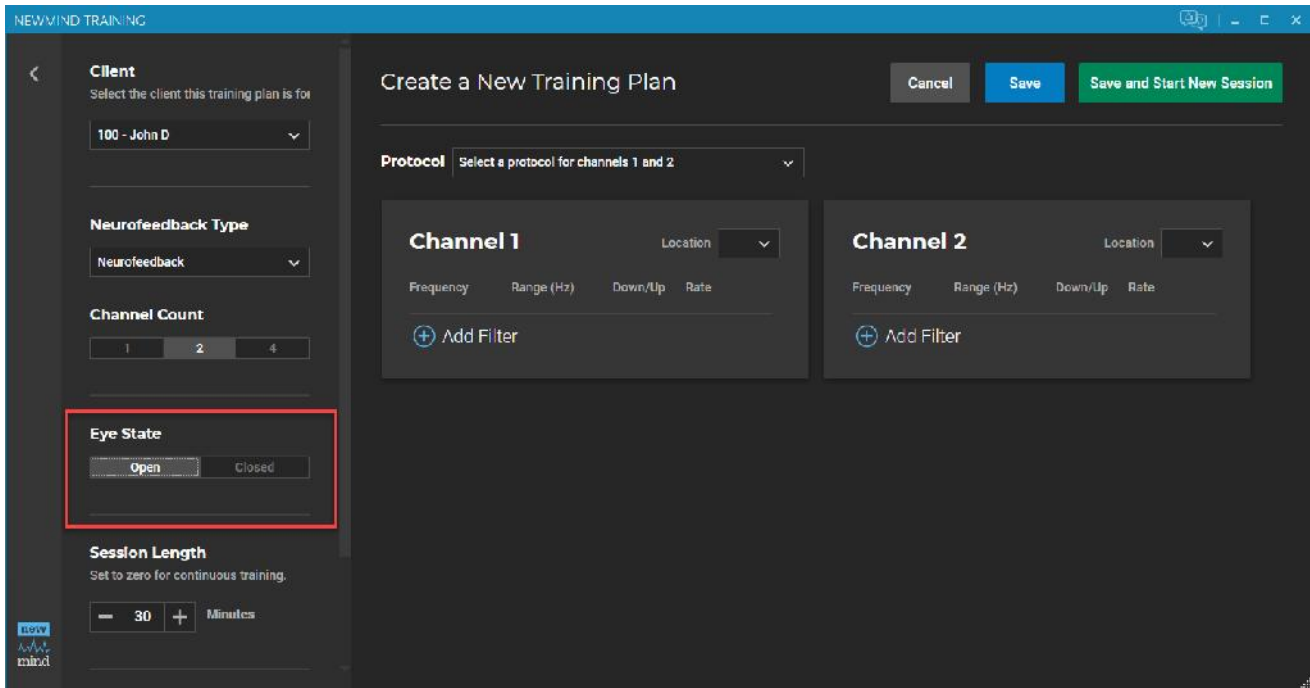
Click on the drop down menu under client and choose the active client that you would like to assign the training plan to.



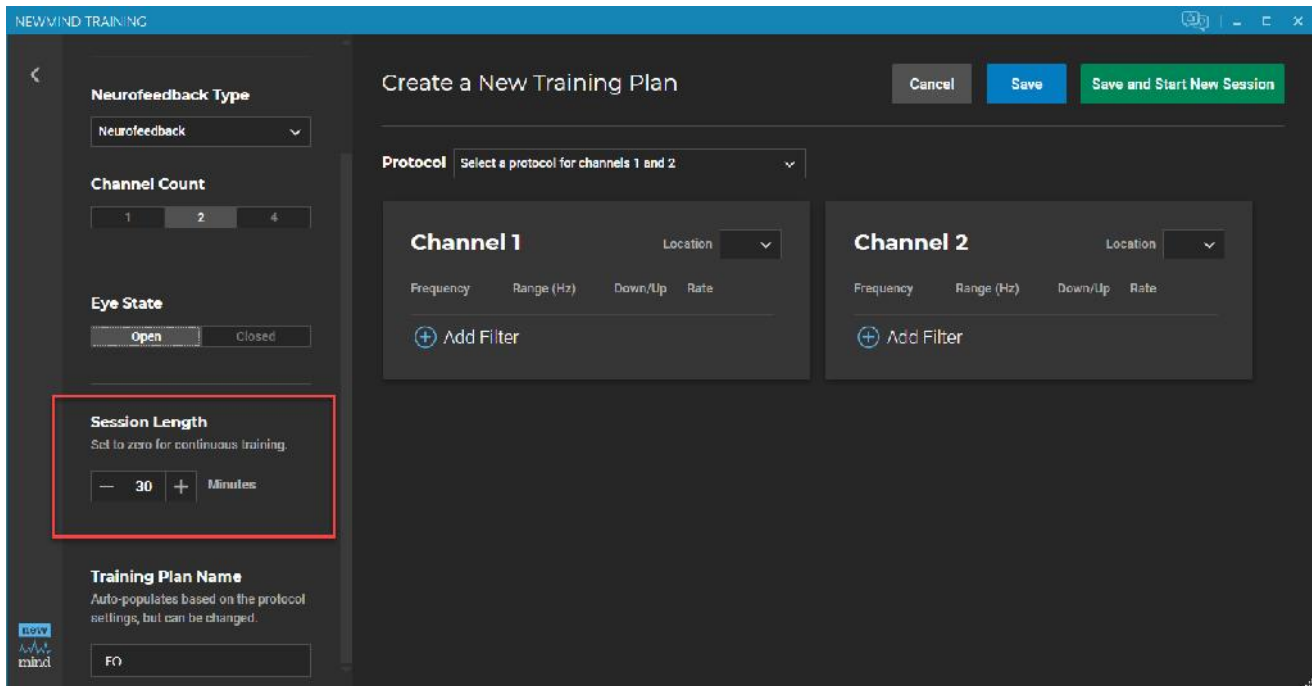
In the **Channel Count** section choose **2**



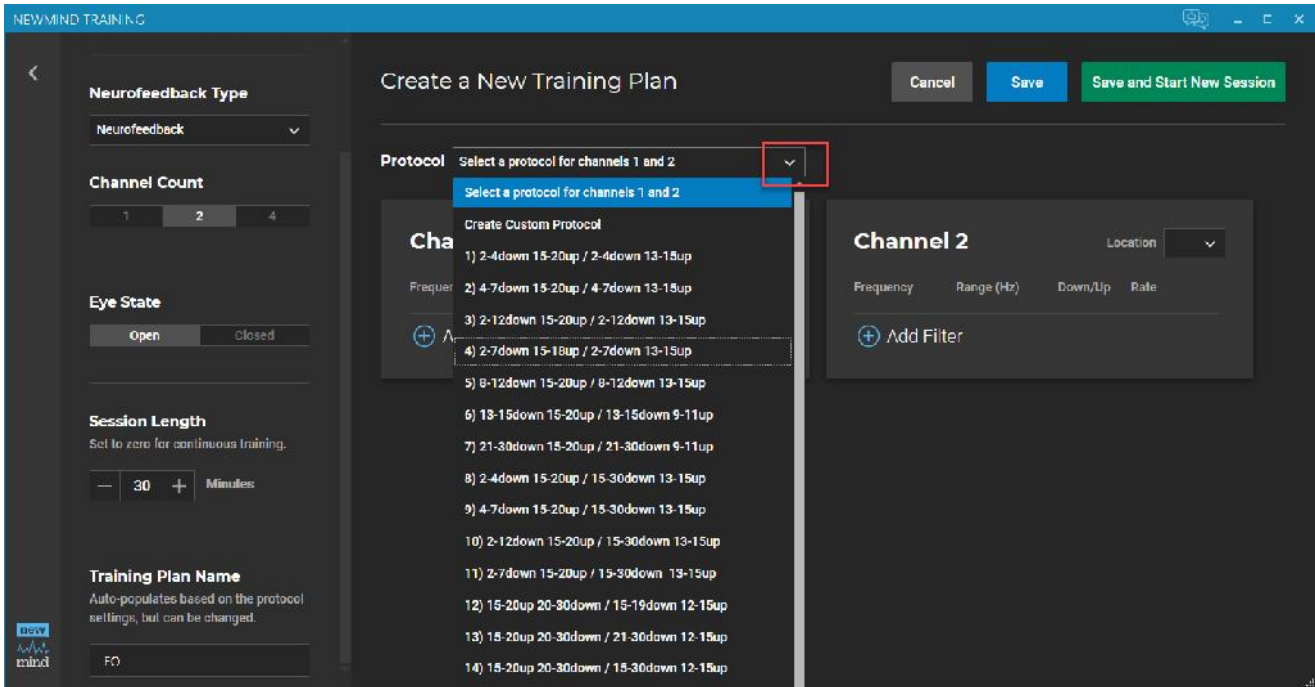
In the **Eye State** section choose whether the session will be done eyes open or eyes closed. In the image below we have chosen eyes open.



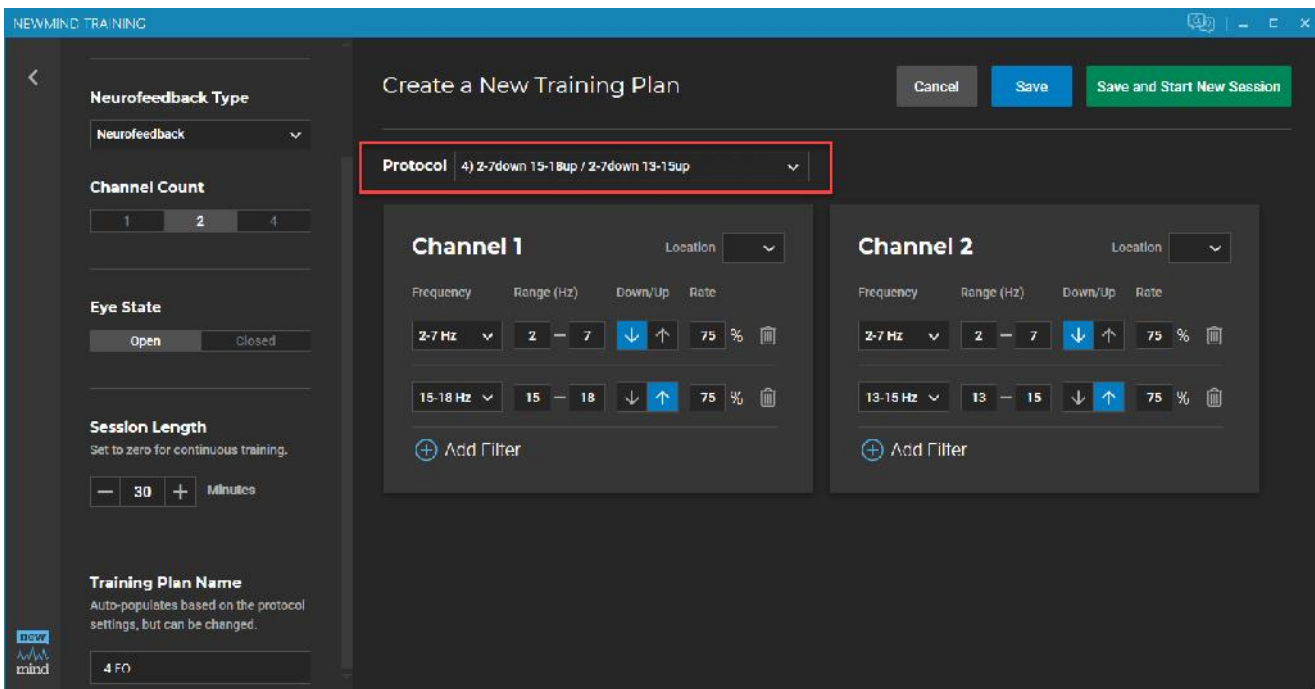
In the **Session Length** section choose whether you will be doing a standard 30 minute session or you can use the plus or minus button to increase or decrease the session time.



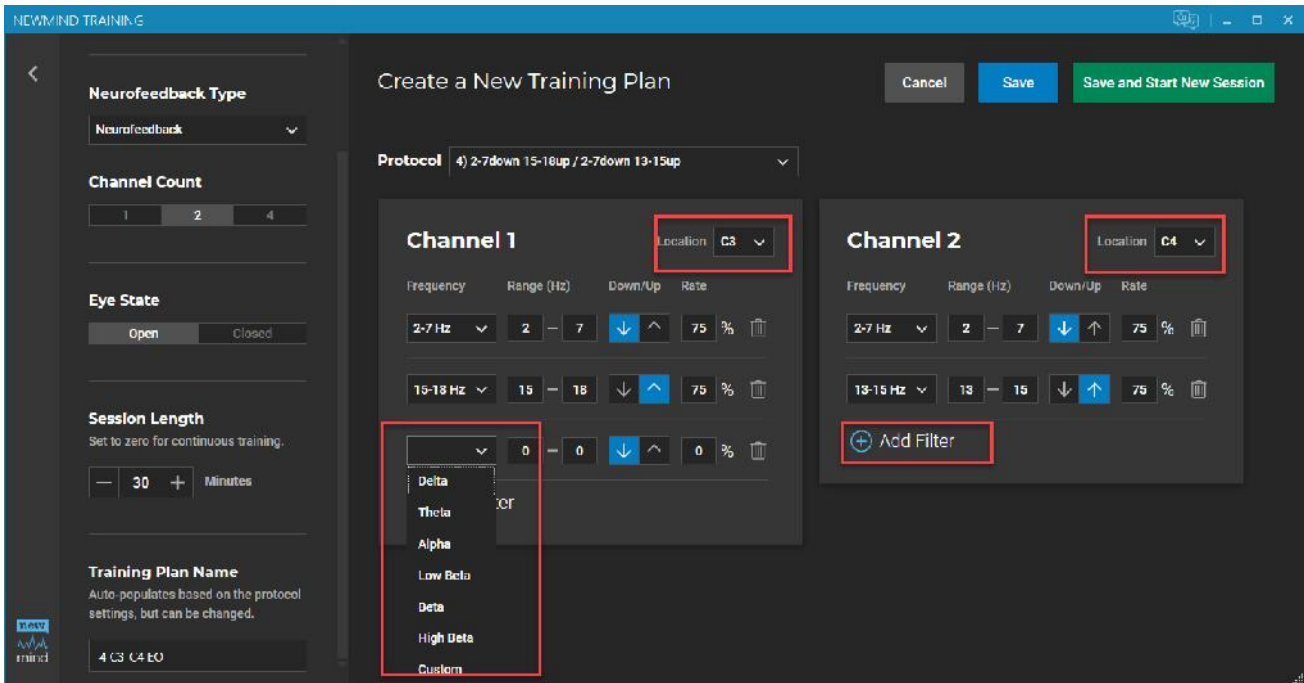
Click on the arrow in the **Protocol** section to open up the available protocols and choose the protocol you wish to use with the training plan by clicking on the protocol.



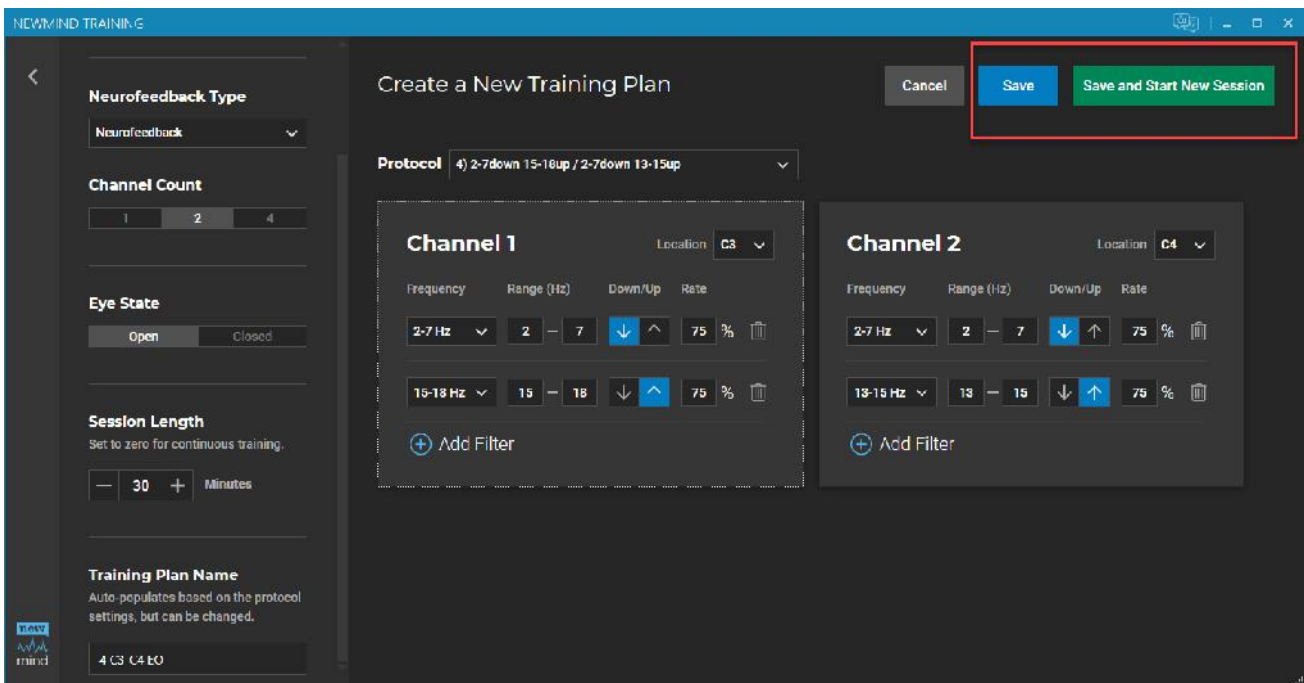
In the example below protocol #4 has been selected. The first number you see before the “)” indicated the protocol number. Everything after that are the frequency bands that will be trained up and down in the left and right hemisphere.



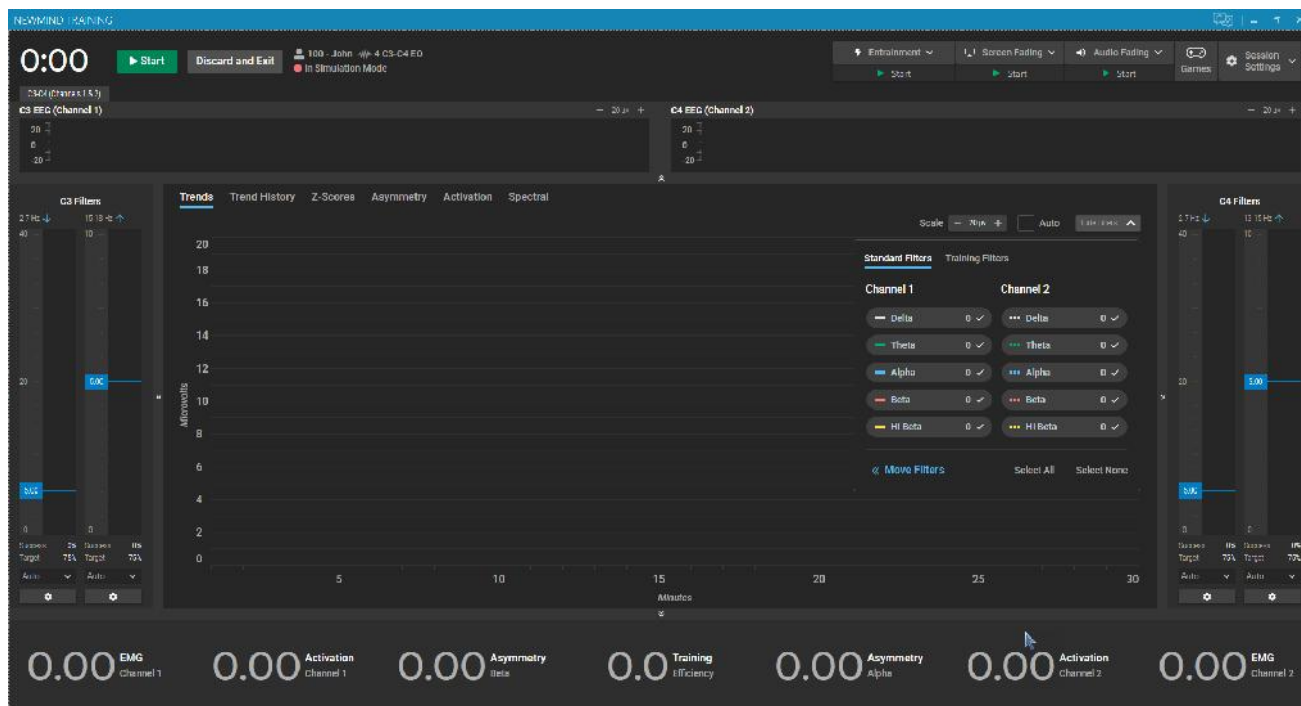
As explained in setting up a one channel protocol; you can do the following: 1) add a filter to either channel, 2) select the locations, 3) create a customized training plan name, as illustrated below .



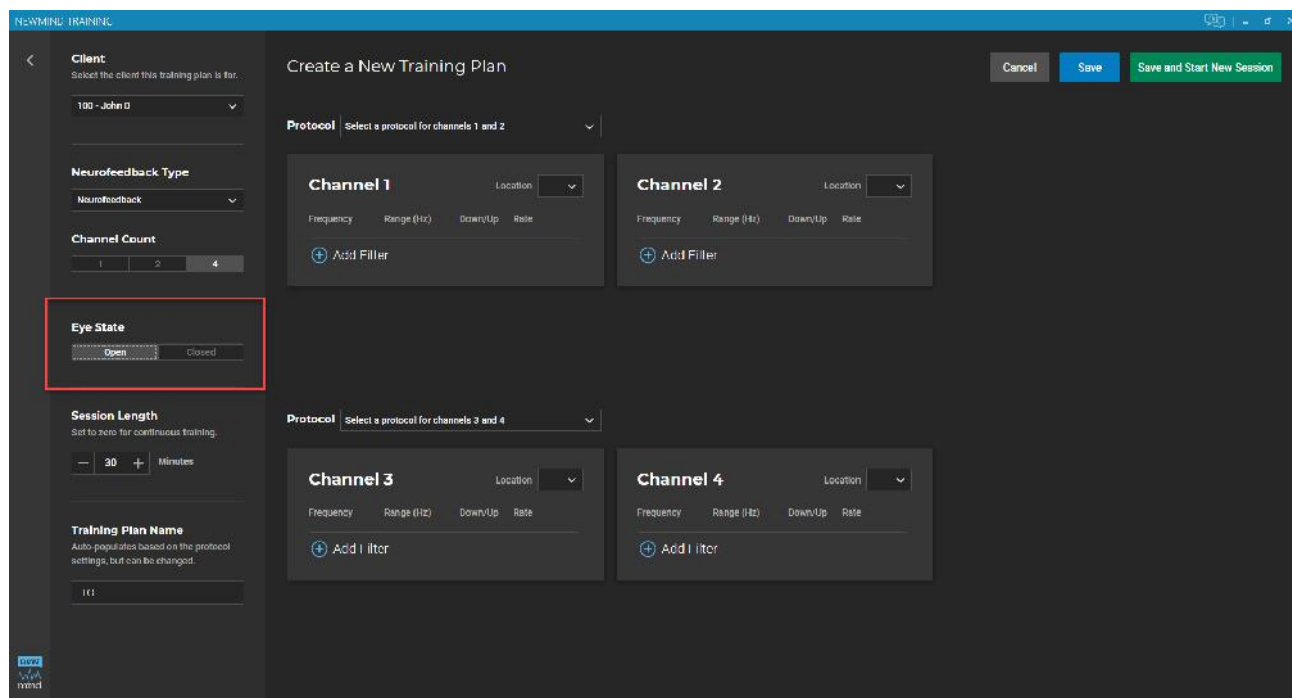
When completed as illustrated below, you can click on **Save** or **Save & Start** .



If you click on **Save and Start**, the training screen a below appears



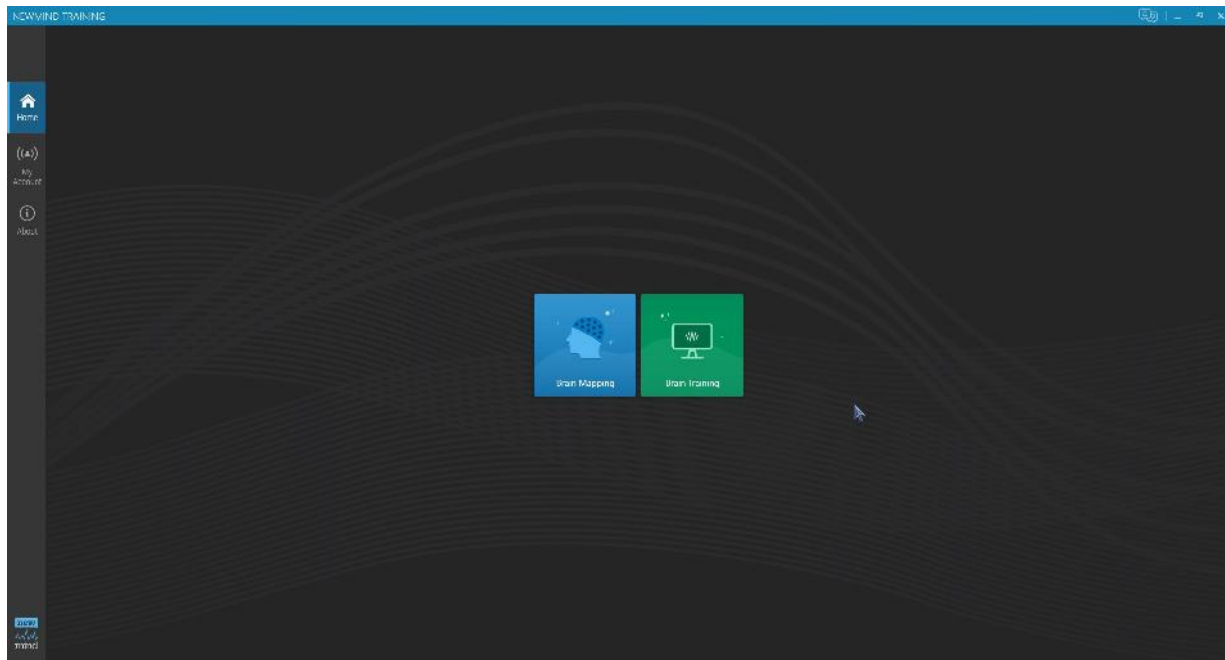
In the **Eye State** section choose whether the session will be done eyes open or eyes closed. In the image below we have chosen eyes open.



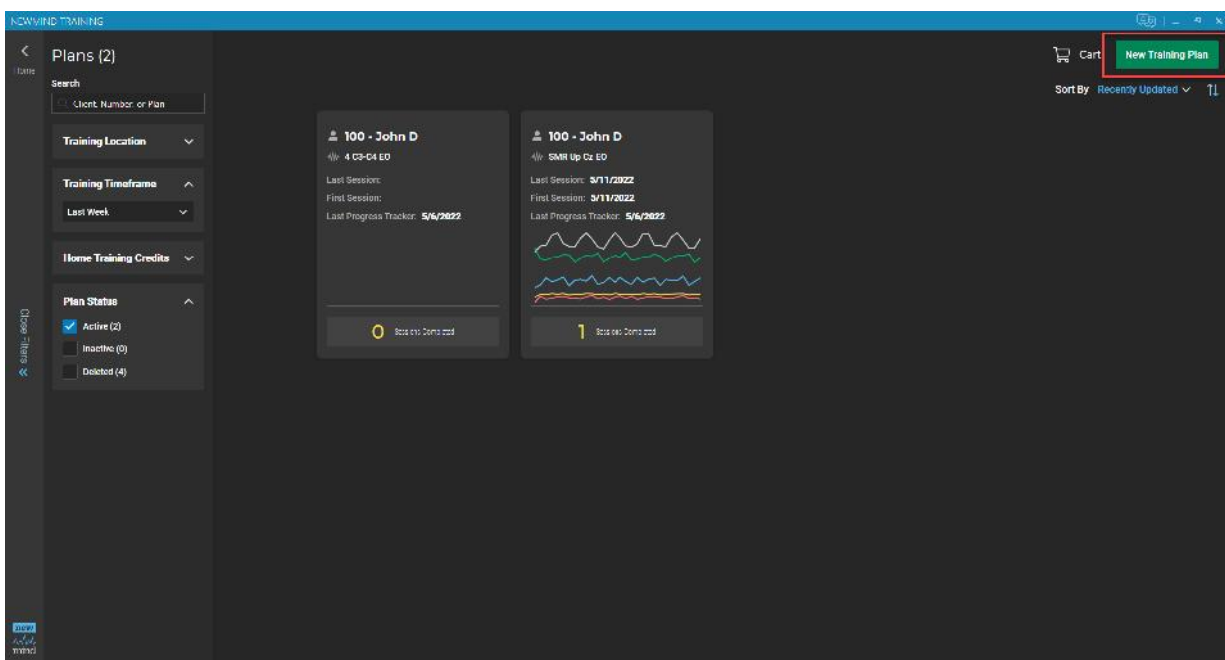
Creating a Four Channel Training Plan

NOTE: Creating a four-channel training protocol is similar to creating a two-channel protocol and most of the steps are the same. As outlined in the previous section on two-channel protocols, follow the same steps for channels 1 & 2, and then repeat the same steps for channels 3 & 4.

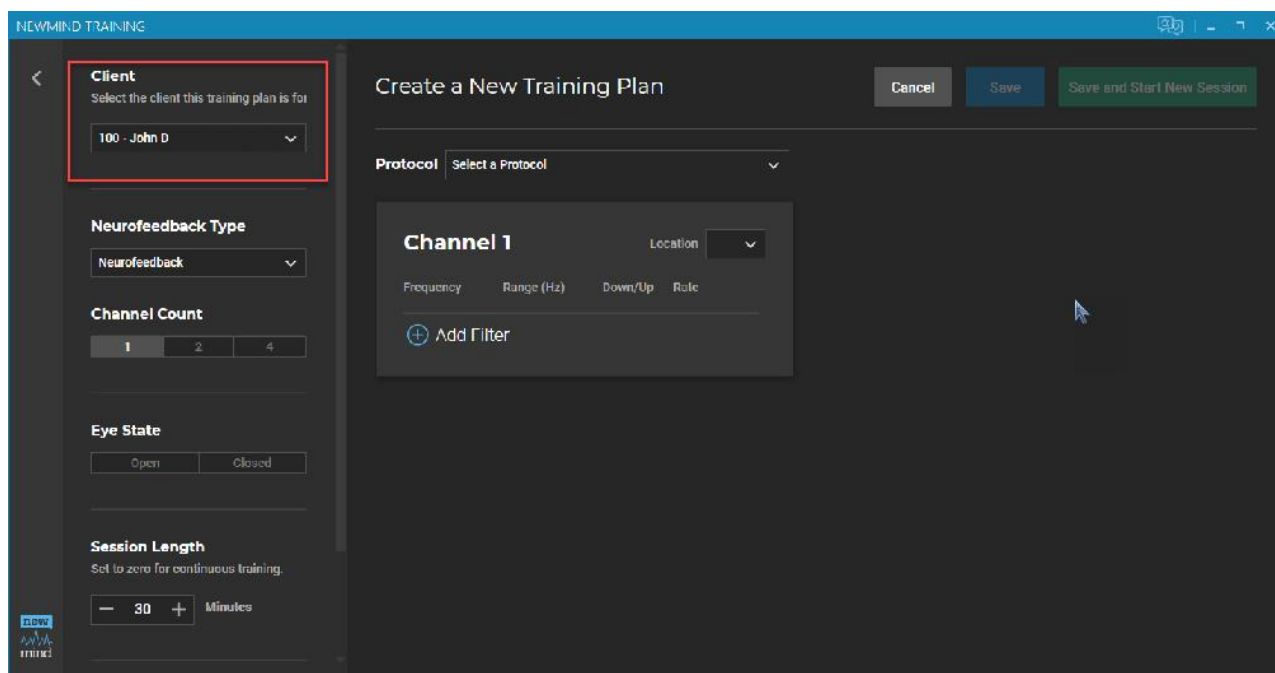
From the **HOME** Screen **click on Brain Training**



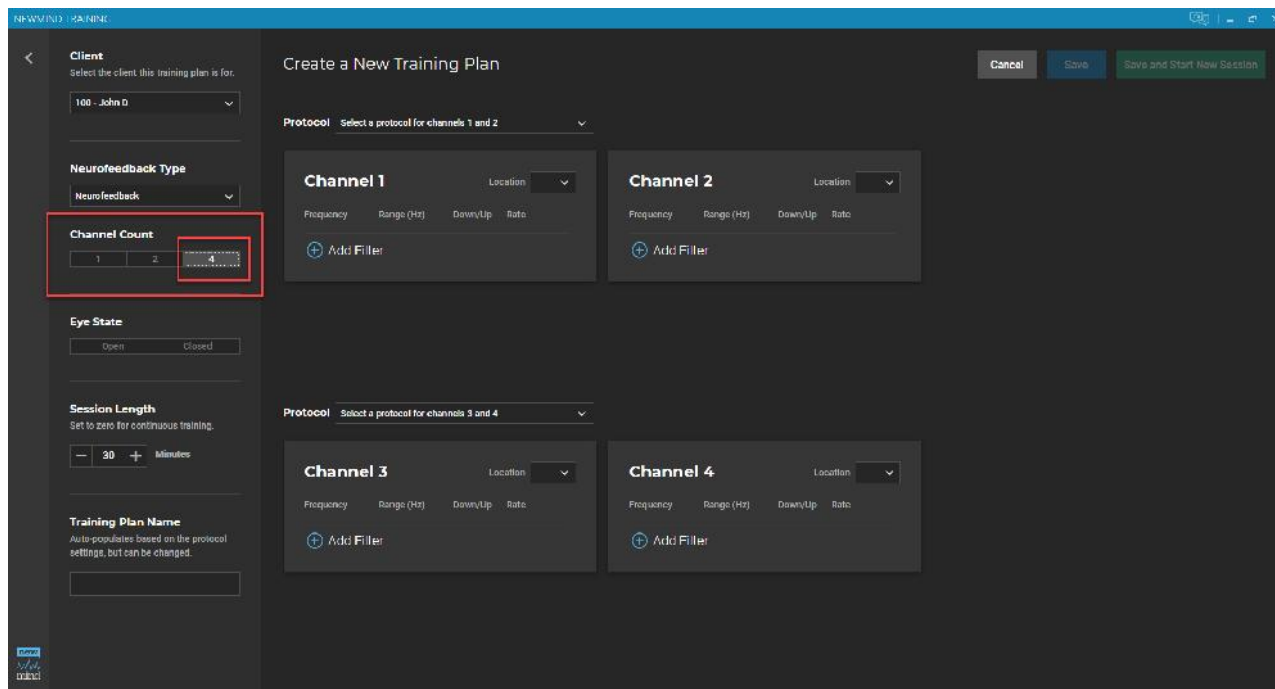
Click on New Training Plan



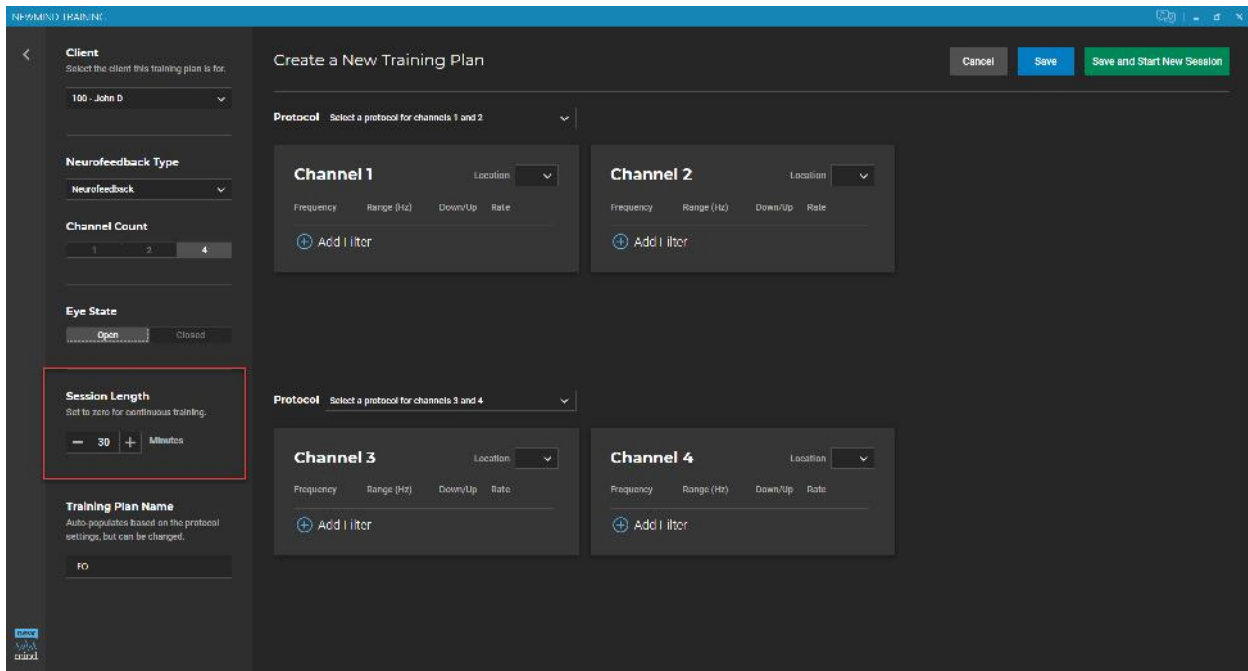
Click on the drop down menu under client and choose the active client that you would like to assign the training plan to.



In the **Channel Count** section choose **4**

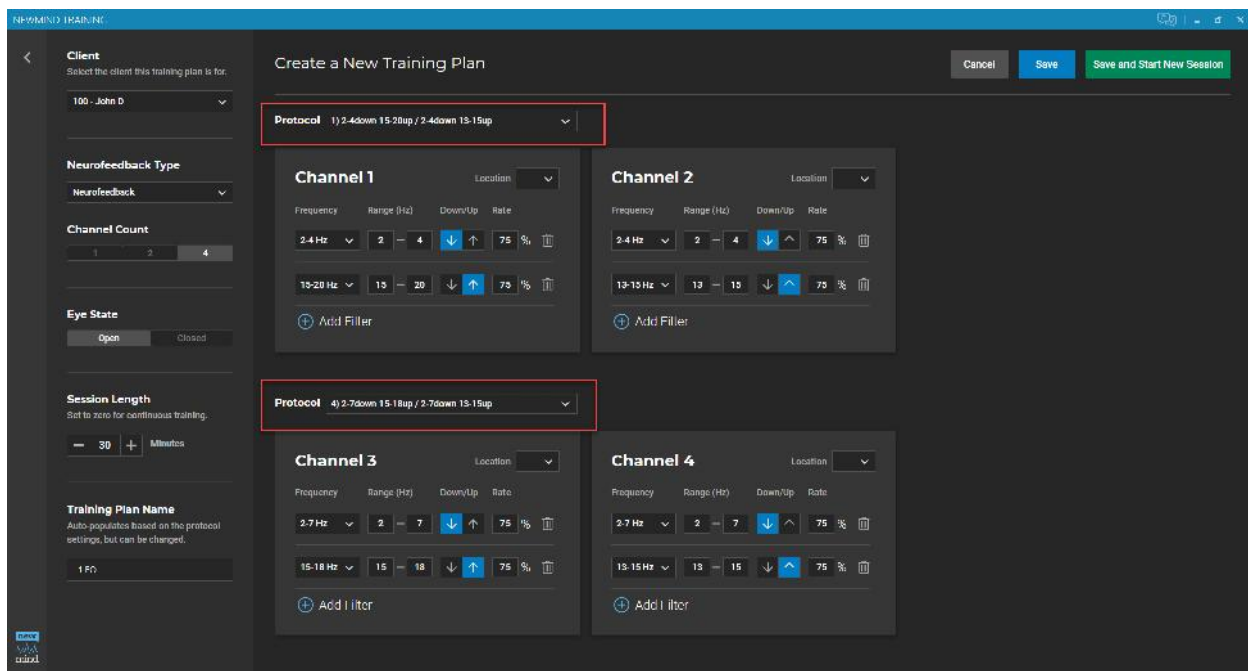


In the **Session Length** section choose whether you will be doing a standard 30 minute session or you can use the plus or minus button to increase or decrease the session time.

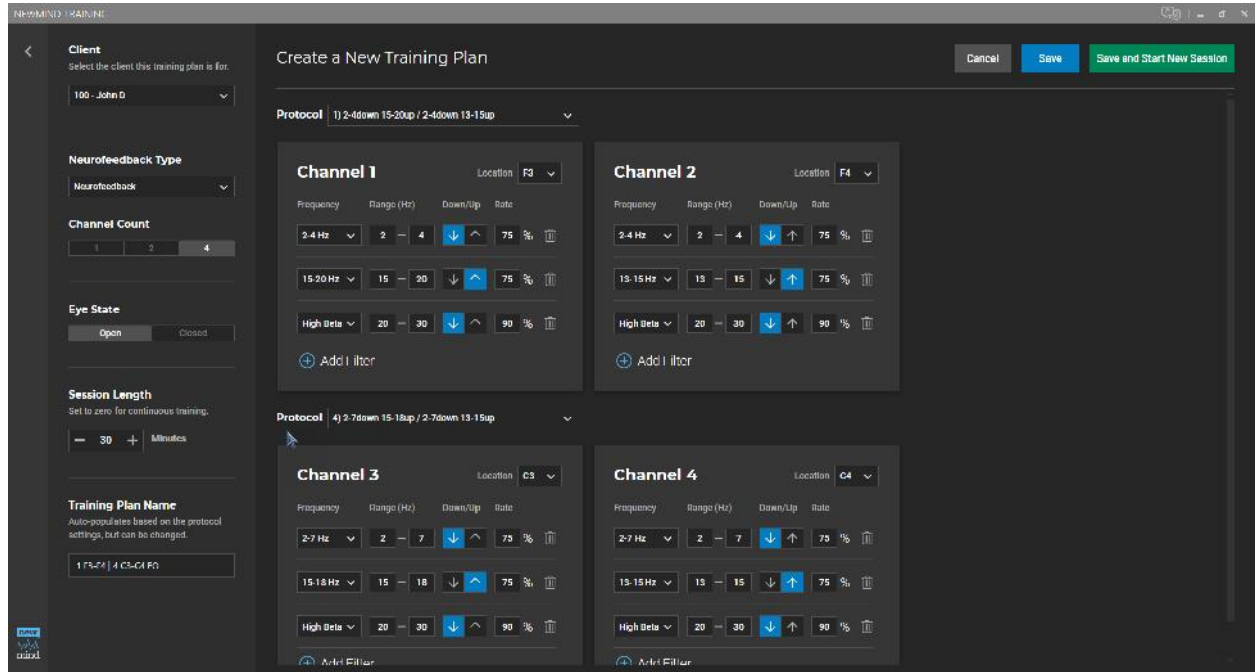


Under Protocols for Channels 1 & 2 **click on the Select a Protocol** arrow and from the drop-down menu, select the protocol you want to use. **Repeat for Protocols for Channels 3 & 4**

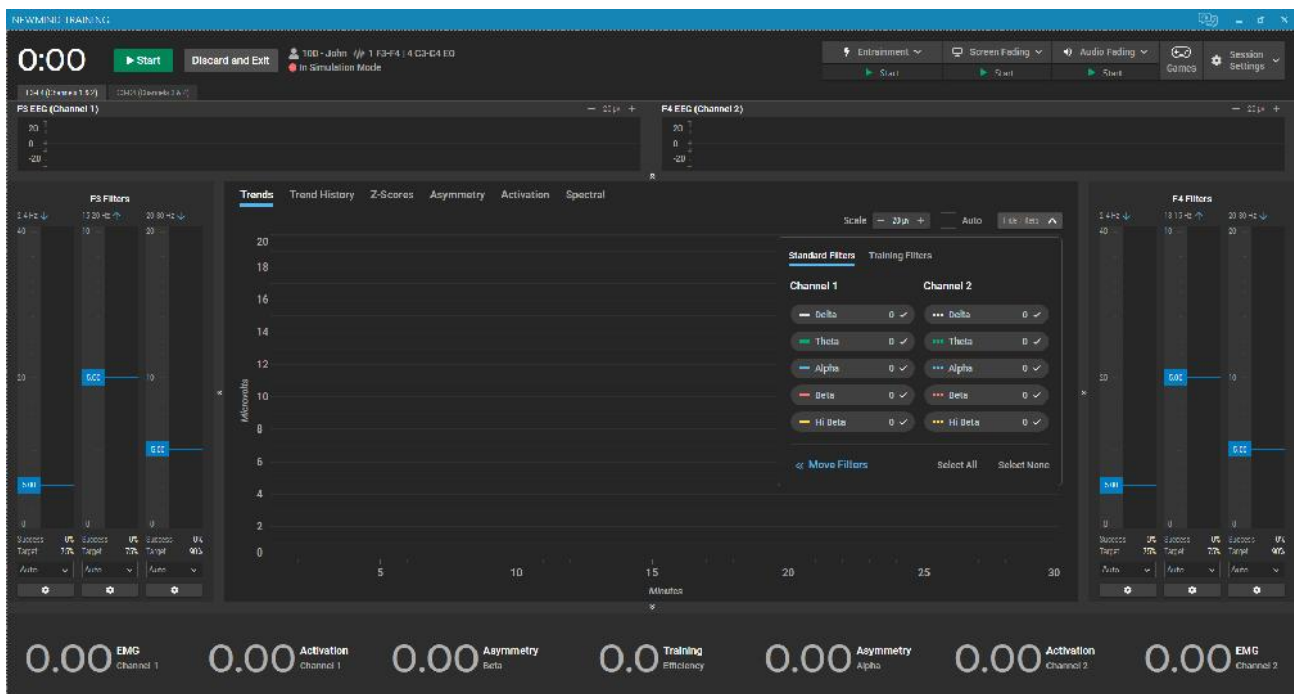
A choice of pre-set protocols appears and in this example protocol #1 is selected for Channels 1 & 2; and protocol #4 is selected for channels 3 & 4



As explained in setting up a two channel protocol; you can do the following: 1) add a filter to any of the four channels (in the example below a **High Beta** filter has been added to all four channels, 2) select the locations (in this example **Channels 1 & 2 are F3 and F4** and **Channels 3 & 4 are C3 and C4**), 3) select a specific client, 4) determine the length of a training session, and 5) create a customized training plan name .



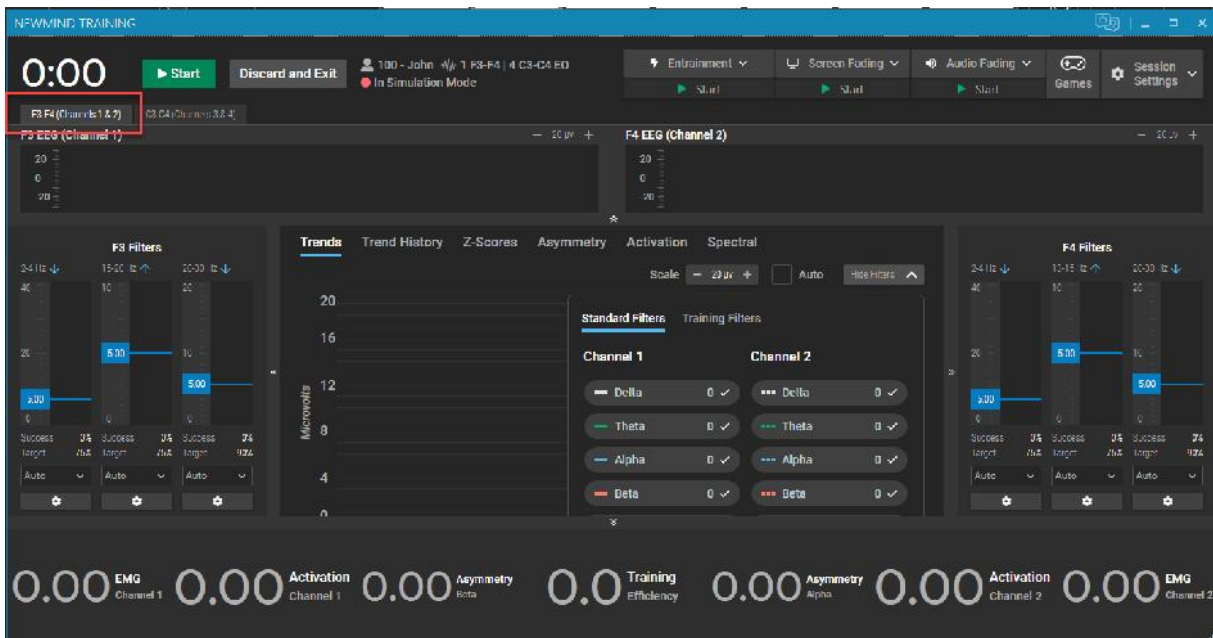
When completed as illustrated above, you can click on **Save** or **Save & Start**. If you click on **Save and Start**, the training screen a below appears



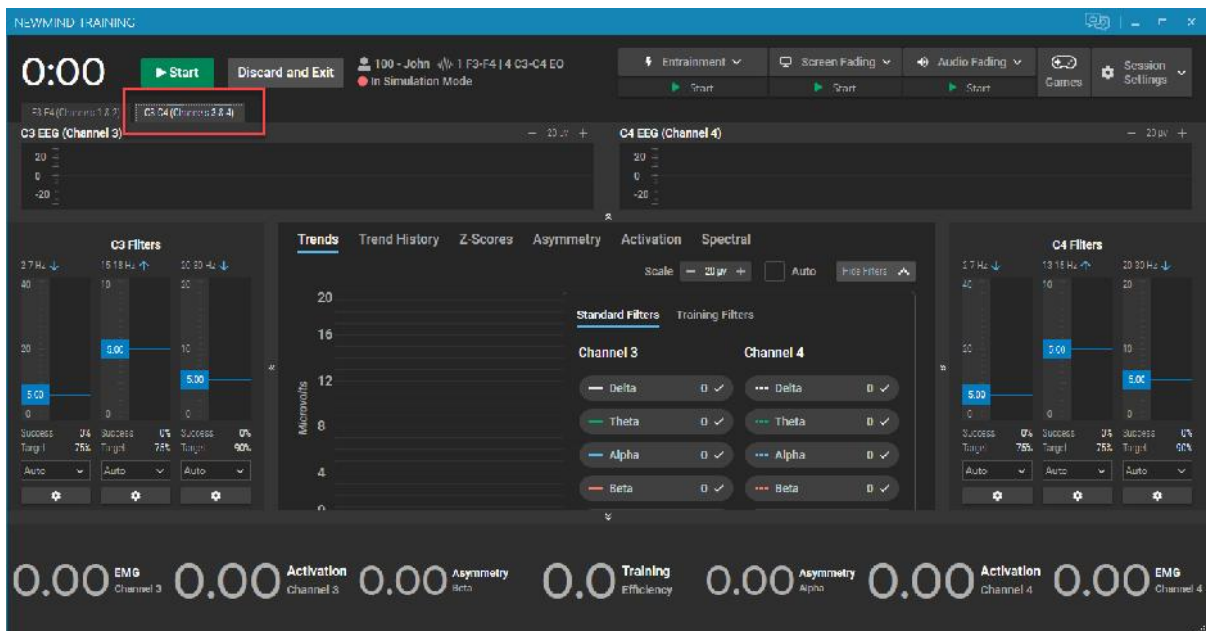
The training screen for a four-channel protocol is similar to the two-channel training screen with the following differences:

There are separate screens for **Channels 1 & 2** which also show the EMG Channel 1, Activation Channel 1, Beta Asym, Training Efficiency, Alpha Asym, Activation Channel 2 and EMG Channel 2 digital readings. You can switch between channels 1 & 2 and channels 3 and 4 by selecting the tab for each as shown below.

Channel 1 & 2

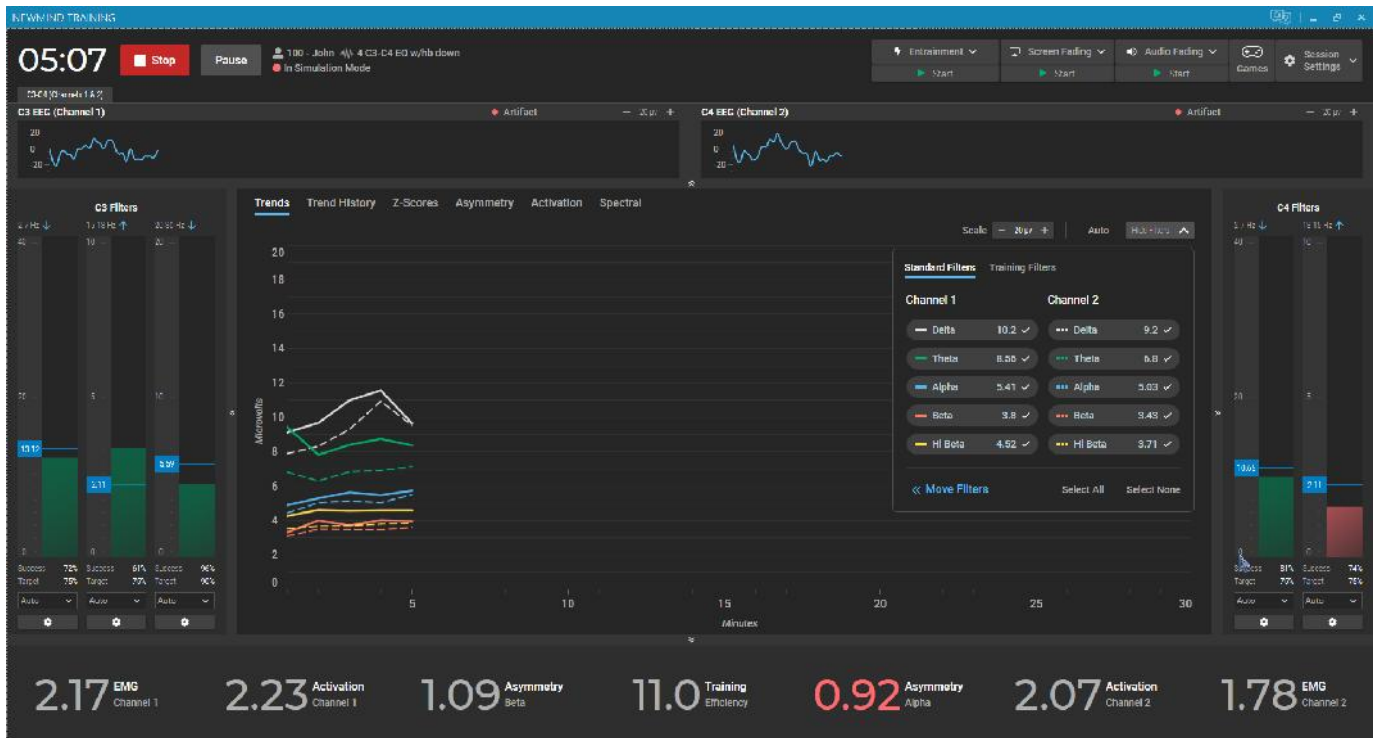


Channel 3 & 4

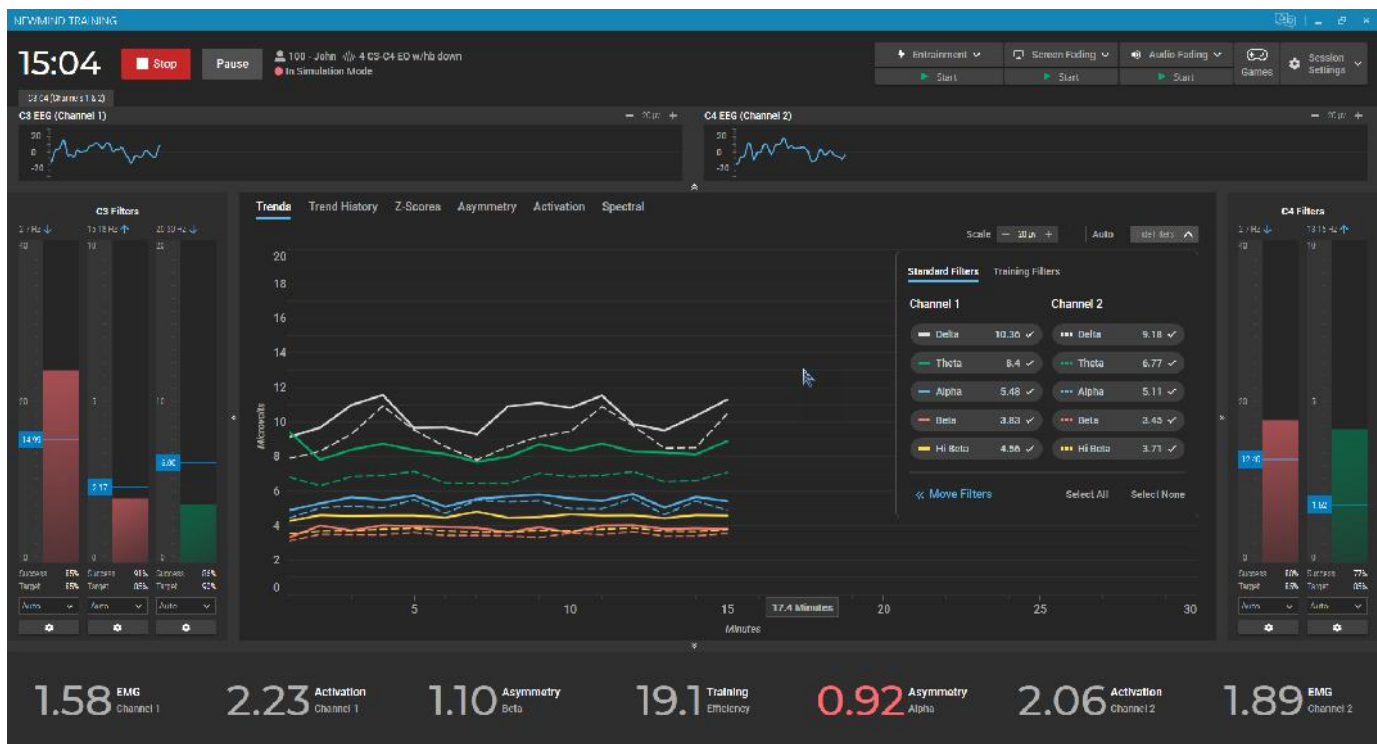


Part IV – Neurofeedback Training Screen Features

The following is an overview of the various training features of the NewMind Training Software. Some of these have been covered in previous sections of this manual. In this section more details may be reviewed on certain features. Make sure you are familiar with the previous sections of this manual before reviewing this section.



In the example above after five minutes of training, the **Left Channel EMG** score is **2.17**; The **Left Channel Activation** Score is **2.23**; The **Beta Asym (Asymmetry)** is **1.09**; The **Training Efficiency** is **11.2**; the **Alpha Asym** is **0.92**, the **Right Channel Activation** is **2.07**, and the right channel **EMG** is **1.78**. The Thermometer training thresholds are all at the default setting of 75%; HiBeta training thresholds are all set at the default of 90% as HiBeta most commonly represents muscle tension and movement which will generally create artifact.



In the example above, the **Thresholds** were **changed** from 75% to 85% after the first five minutes of the session, and the readings are after fifteen minutes of training. The Left Channel EMG score is **1.58**; The **Left Channel Activation** Score is **2.23**, The **Beta Asym (Asymmetry)** is **1.10**; The **Training Efficiency** is **19.1**; the **Alpha Asym (Asymmetry)** is **0.92**, the **Right Channel Activation** is **2.06**, and the right channel EMG is **1.89**.

The recommended **Trend Screen** training parameters, ranges, and average readings, should read:

EMG: EMG indicates the level of electrical activity coming from muscle tension. At high levels this can result in inaccurate and unusually high readings in Beta and High Beta. It is best to keep EMG readings under 5.0 and IDEALLY at 3.0 or less.

ACTIVATION: Activation represents the ratio of slow to fast wave activity which is a proxy measure of brain activation. Lower values indicate higher levels of activation. The ideal range is between 2.0 and 3.0 with 2.5 being the perfect value.

When values drop **BELOW 2.0** it is an indicator of excessive fast wave or **OVERAROUSAL**. If the reading is **1.0 or lower**; the client/patient is overactivated and likely stressed and not training as well as he /she should. **NOTE: Scores lower than 1.0 may be the result of excessive EMG.**

When values are **ABOVE 3.0** it is an indicator of excessive slow wave or **UNDERAROUSAL**. If the reading is **3.5 or greater**; the client/patient is under-activated and not training as well as they should.

Beta Asymmetry: Beta Asymmetry near 1.0 or greater indicates a lower tendency to experience Anxiety.

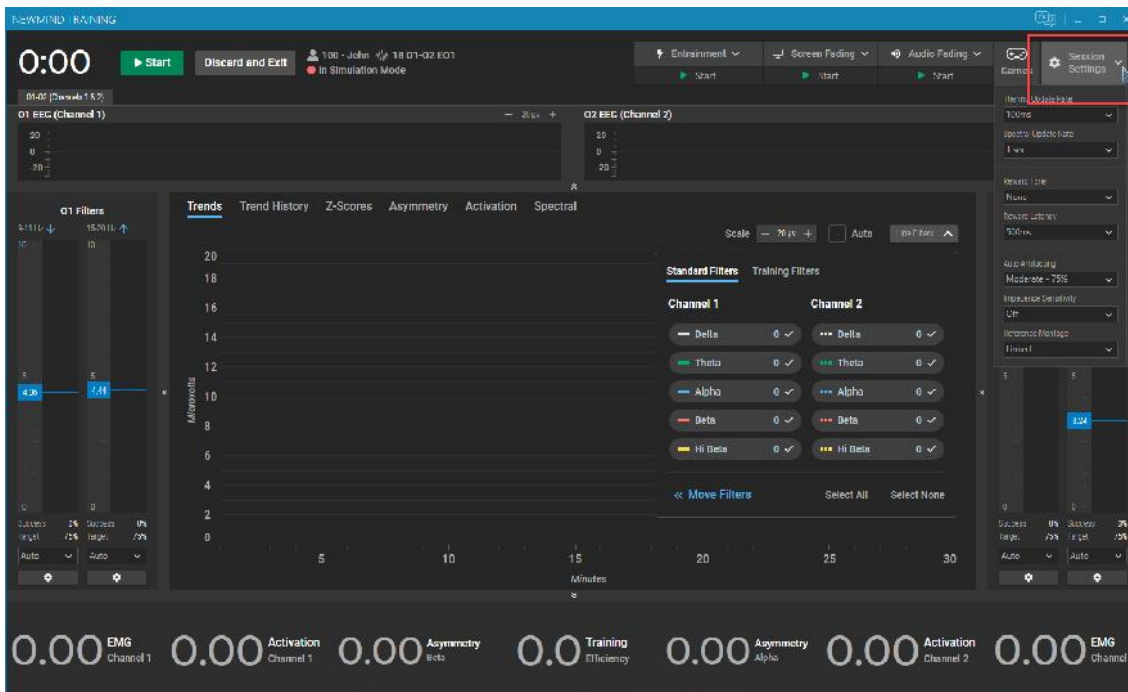
Alpha Asymmetry: Alpha Asymmetry near 1.0 or greater indicates a lower tendency to engage in negative moods.

NOTE: The Alpha and Beta asymmetries are often interactive. In most (but not all cases) they should average between 1.0 and 1.1 and when combined the two scores should equal around 2.0 – 2.2.

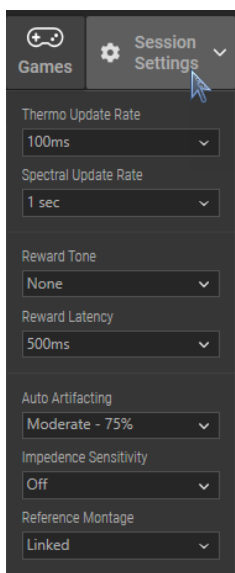
Training Efficiency: Indicates how frequently training criteria is being met. The higher the value, the better the training quality. 5.0 – 30.0

Impedance and Artifact

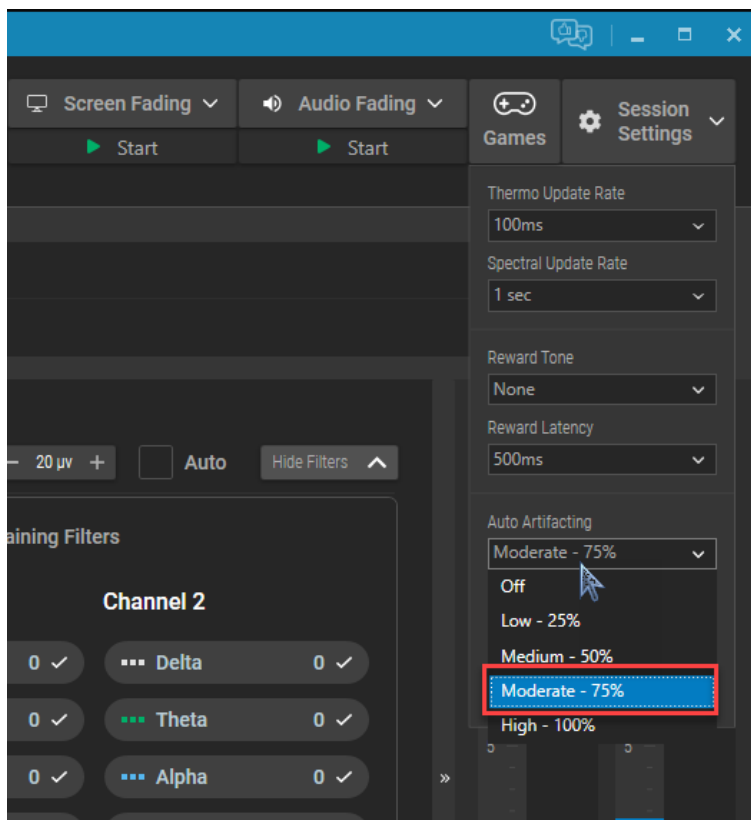
When you click on *Session Settings*, the drop-down window appears.



In the *Session Settings* window are the settings for **Impedance Sensitivity** and **Auto-Artifacting**.



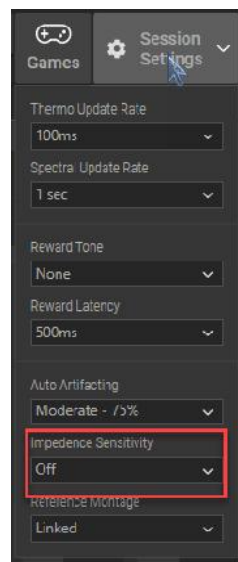
The default setting for auto-Artifacting is set at 75%



When you are watching the trend screen; if you do not see the red **Artifact** warning come up on the top of the trend screen above the raw EEG screens, then you can increase the setting to 100% if the client/patient has no muscle tension and sits perfectly still or turn it off. If the client/patient has mild muscle tension or minimal movement, you can reduce the setting to 25%. When Auto-artifacting is running, the actual training stops when the **Artifact** indicator is present, however, the session timer continues to run. At the end of a session with auto-artifacting, you may notice the session length is 30 minutes, but the trend screen shows the session was only 28 minutes long.

The Impedance Sensitivity setting is defaulted to off

If you are concerned about impedance during a session you can set your *Impedance Sensitivity* to one of the three settings; **Low**, **Moderate** or **High**.



The Trend Screen and Session Reviews

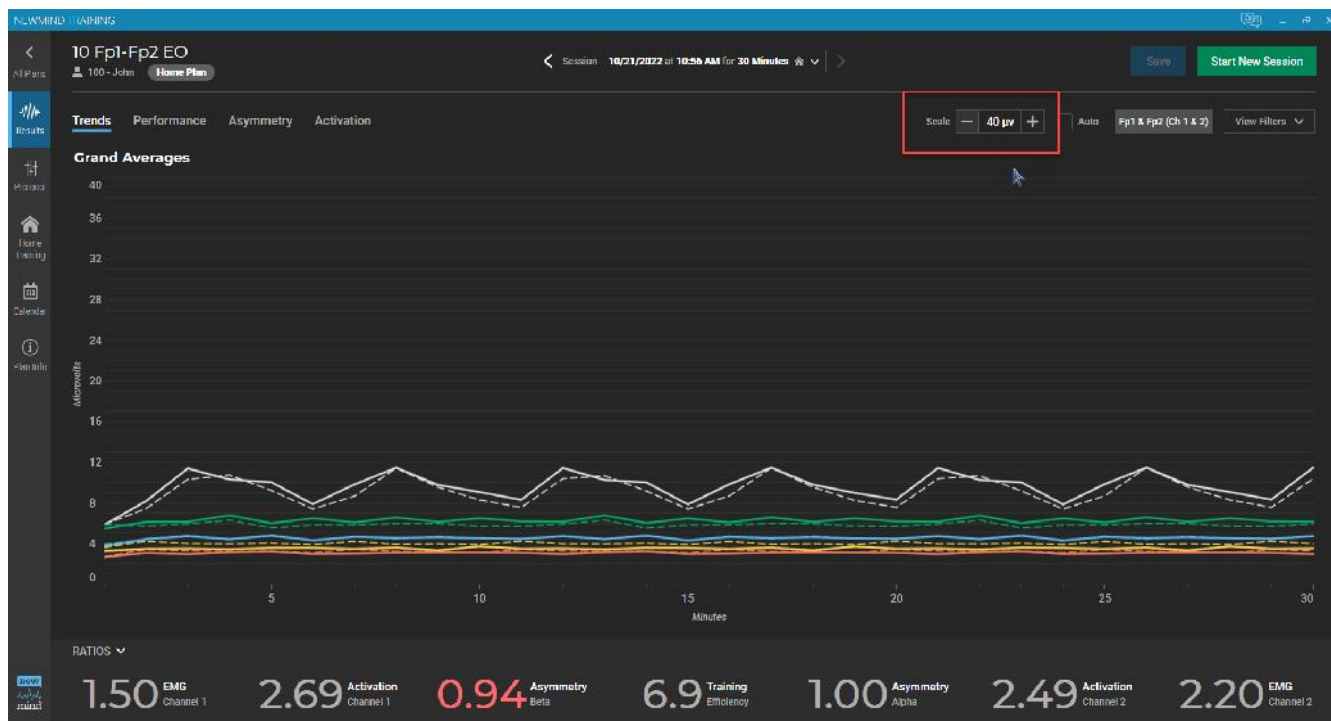


When a session is completed and saved, the trend screen looks like the example above.

If you check the **Auto-Scale** box, the trend screen expands as illustrated below.

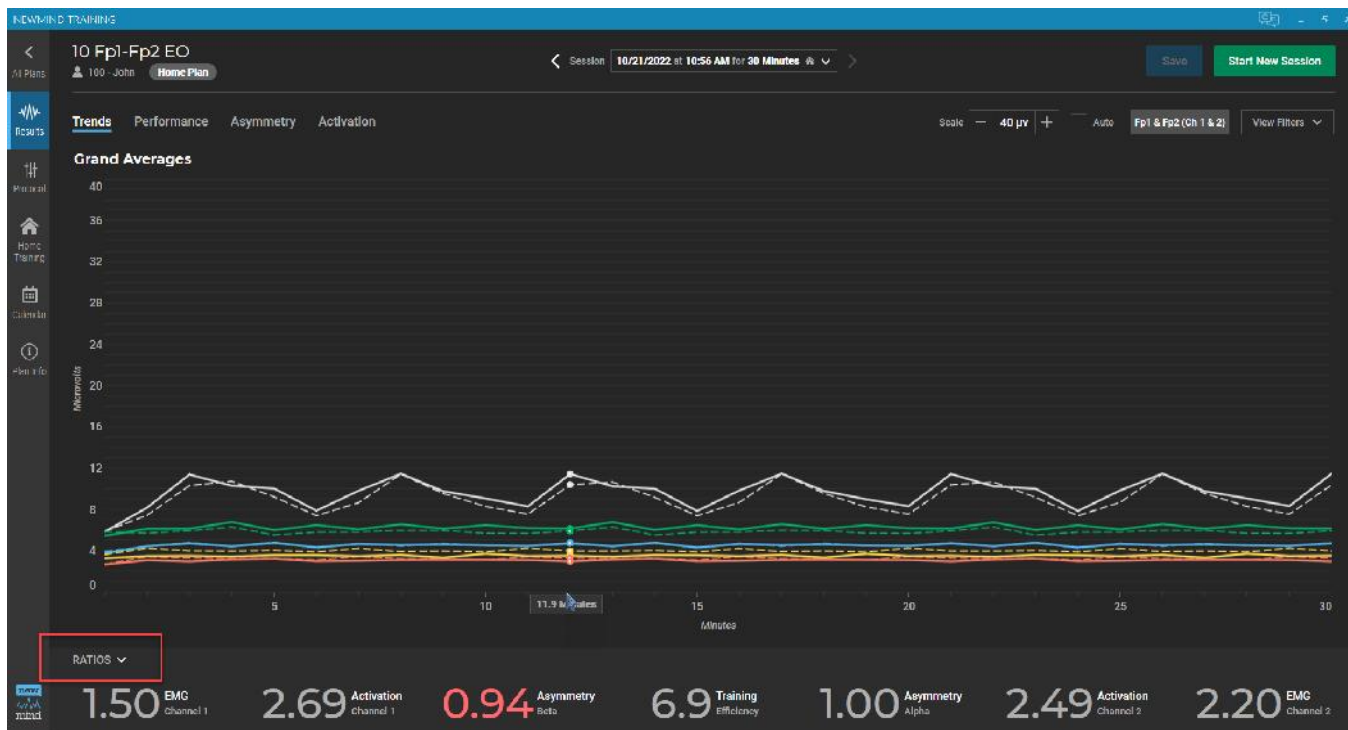


If you **click on the plus (+) sign of the Microvolts + - Microvolts**; the trend screen compresses as illustrated below

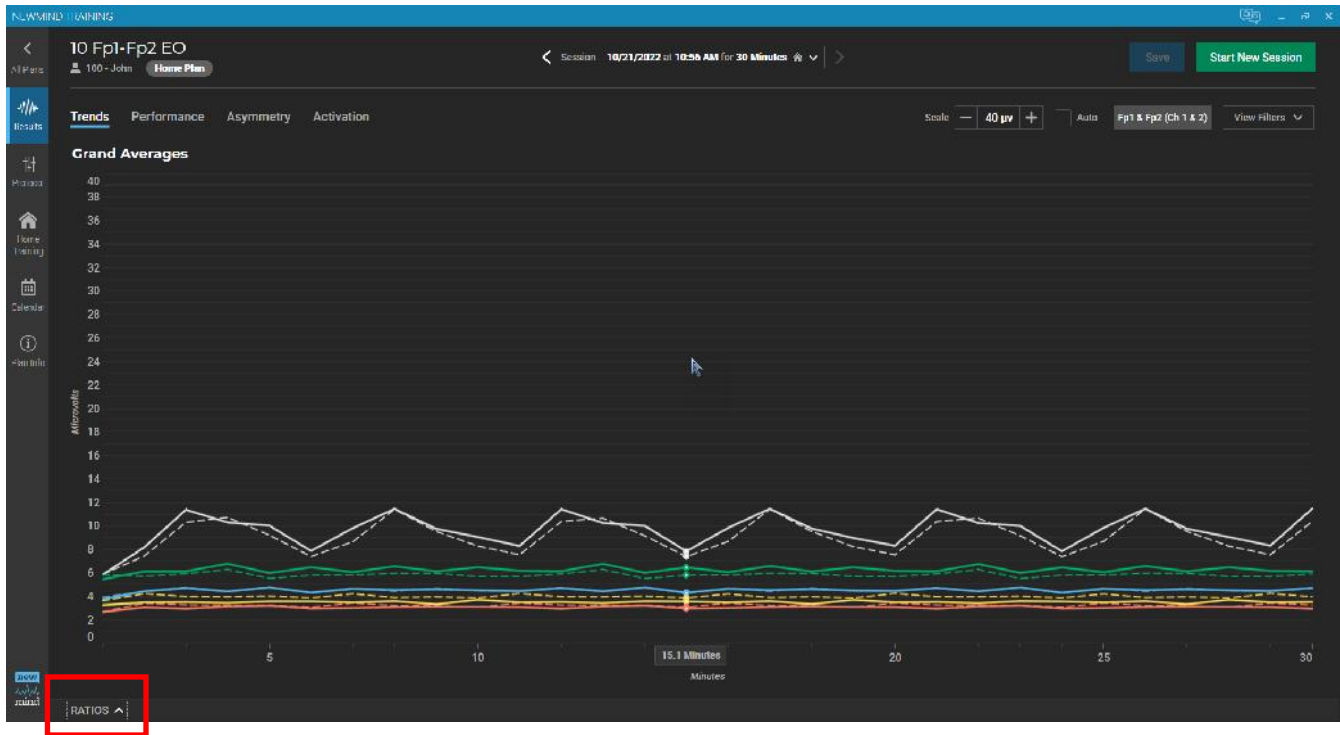


Collapsing the Numeric Values on the Trend Screen

To collapse the numerical values below the trend screen click on “Ratios”.

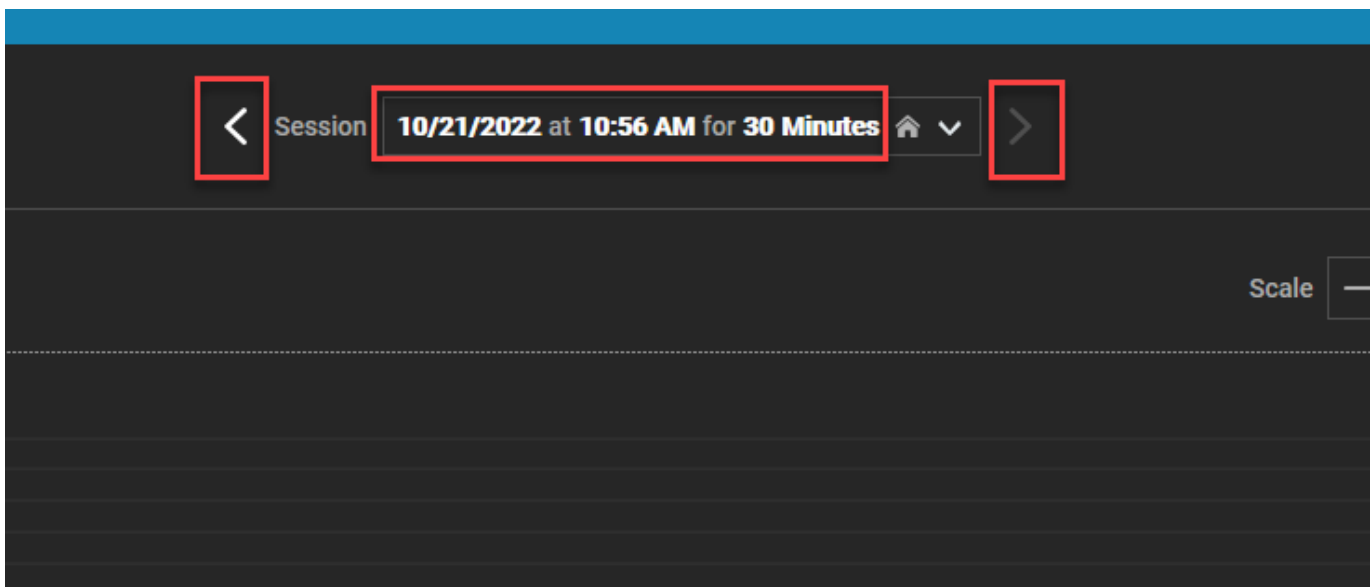


If you click on the Ratios tab on the **Trend Screen**, the numeric values collapse and disappear as illustrated below. To view the numerical values again click on the Ratios tab again.



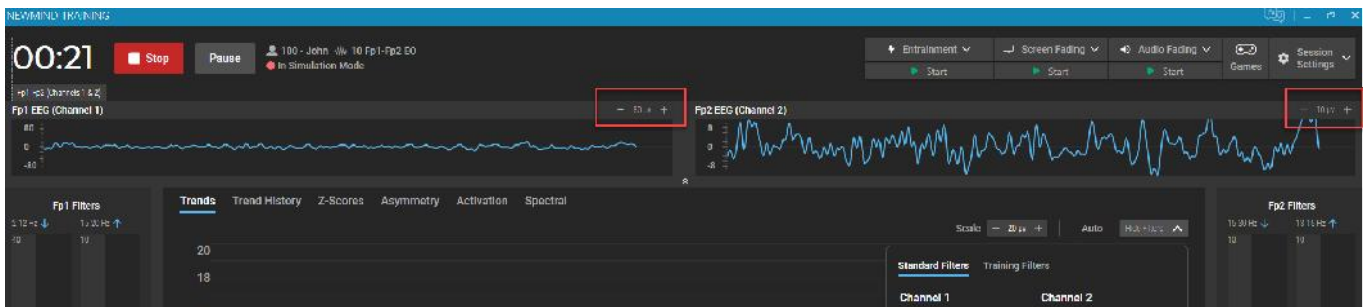
Reviewing Past Session Trend Screens

If you click on the left arrow, the previous session appears on the screen. If you click on the right (forward) arrow, the next session appears. **Also NOTE**, that to the right of the date and the time you will find the length of time the session actually ran.



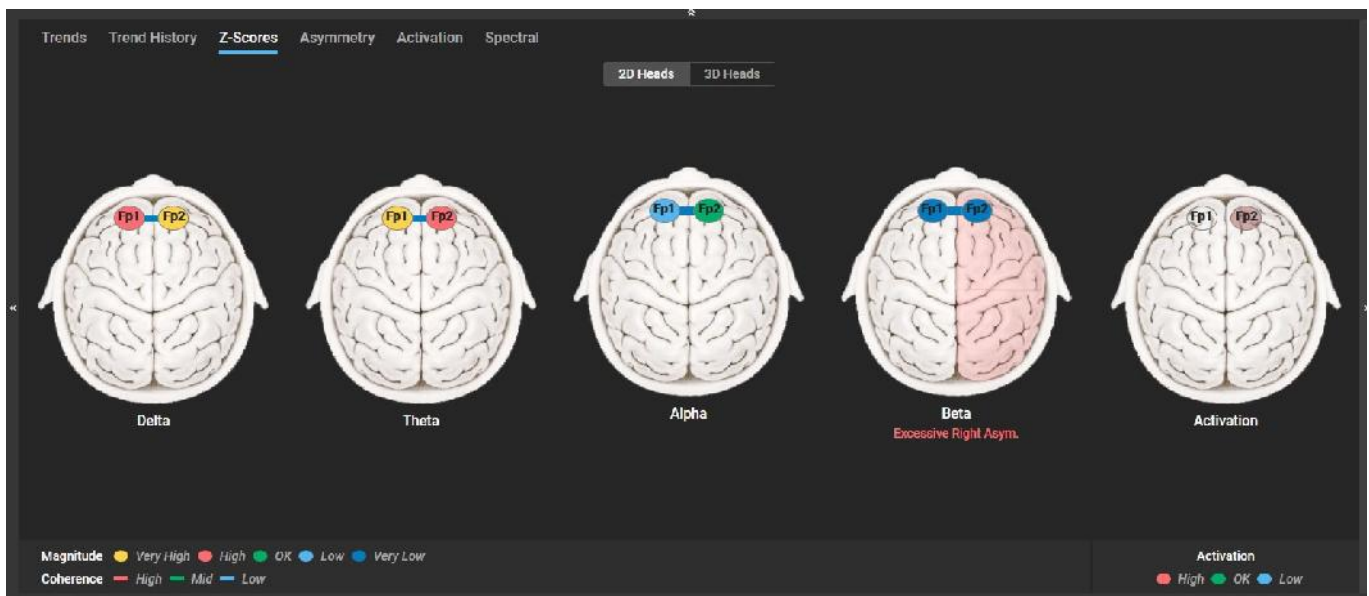
Raw EEG Screen

In the upper right-hand corner of each raw EEG screen is the +/- symbol. Using the plus or minus you can also adjust the size of the bandwidth on the screen. In the example below the left side (**Channel 1**) is set at 80 microvolts and the right side (**Channel 2**) is set at 10 microvolts.



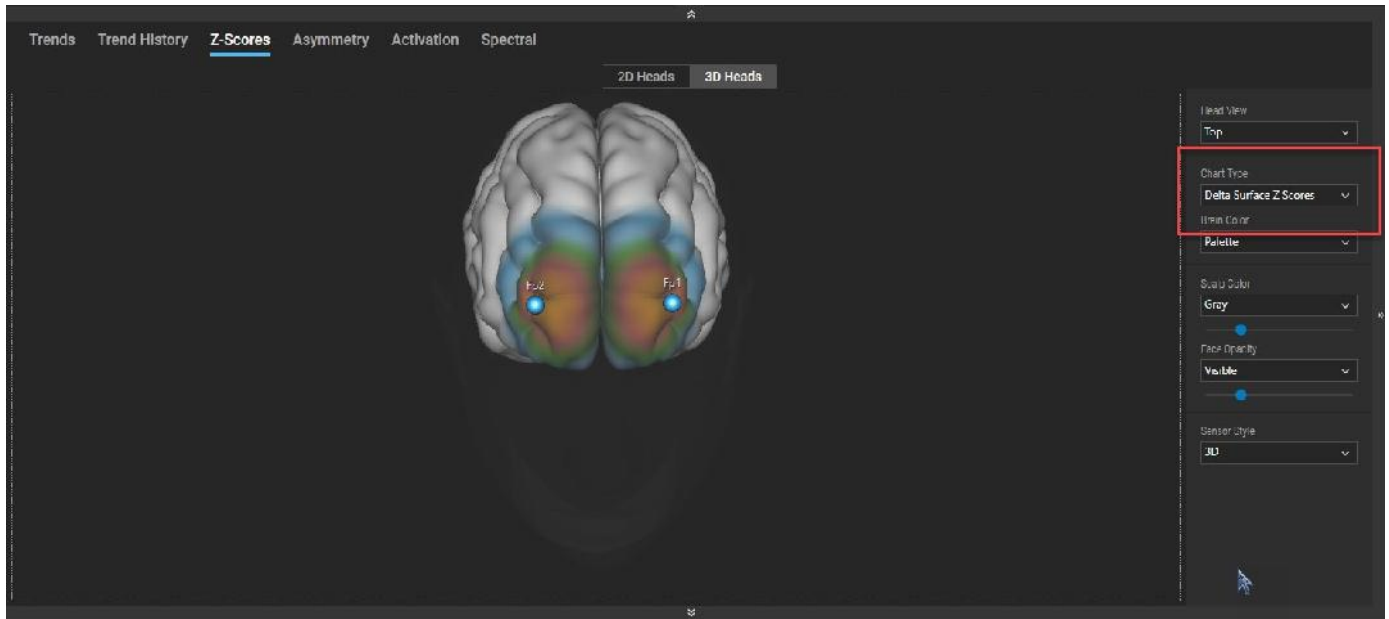
Z-Scores 2D Head Screen

This screen shows you the Magnitude and Coherence in real time. The colors denote the power of the magnitude and the levels of coherence. Beta and Alpha Symmetries are also displayed.

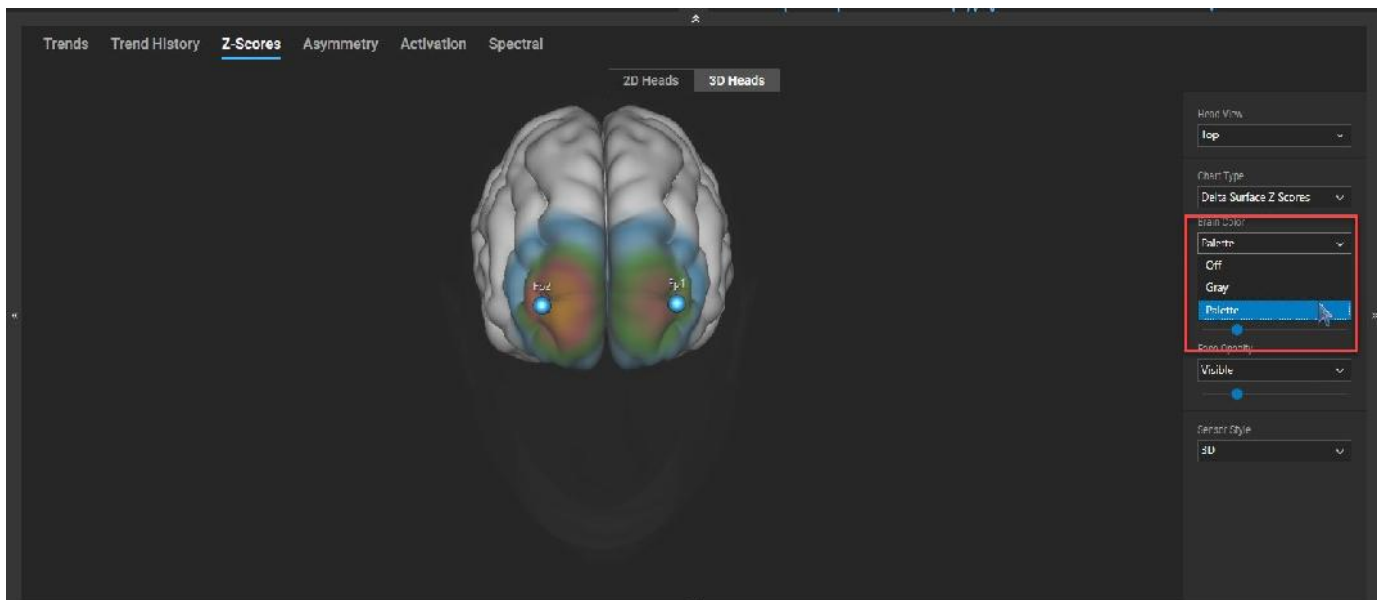


Z-Score 3D Heads

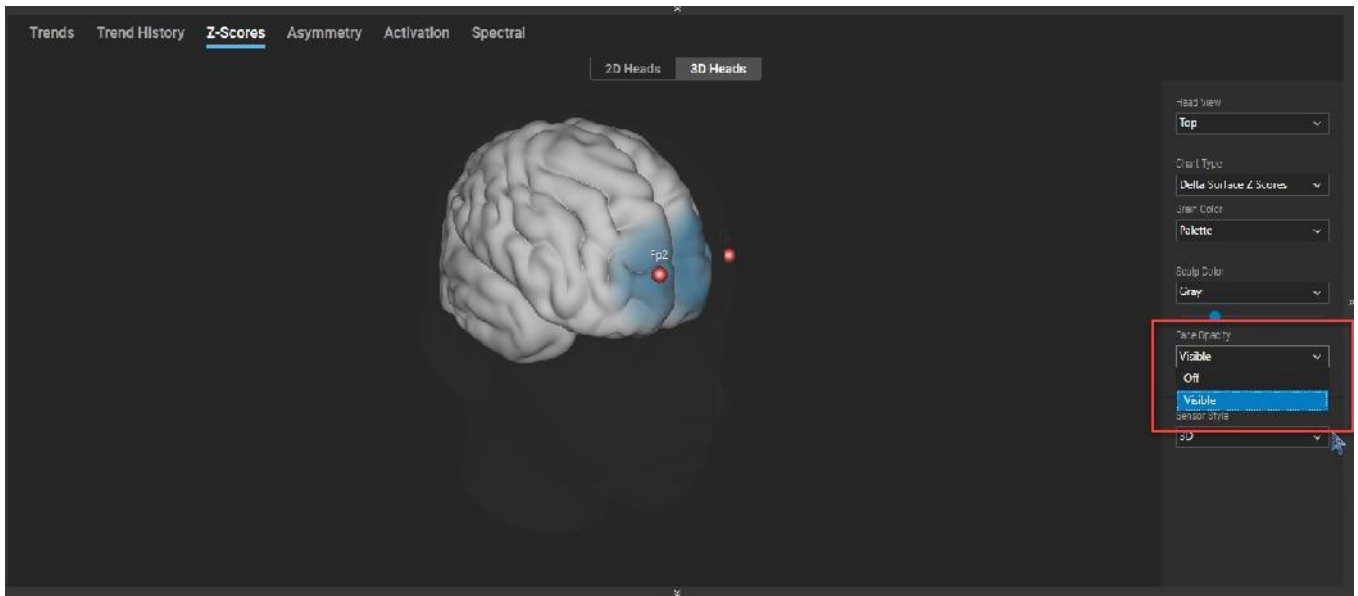
When you click on 3D Heads, the following screen appears. In **3D Heads**, the **Chart Type** tab allows you to select what band width you wish to see. In the illustration below **Delta** is selected.



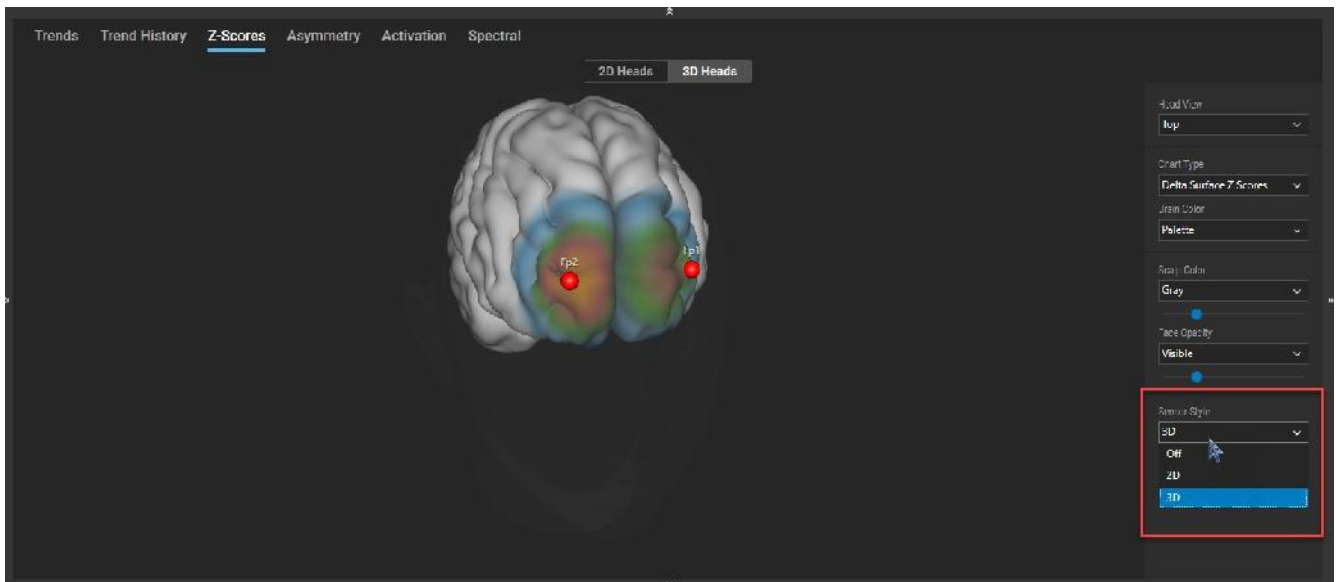
The **Brain Color** option allows you to select from **Palette** (Color) vs **Gray**.



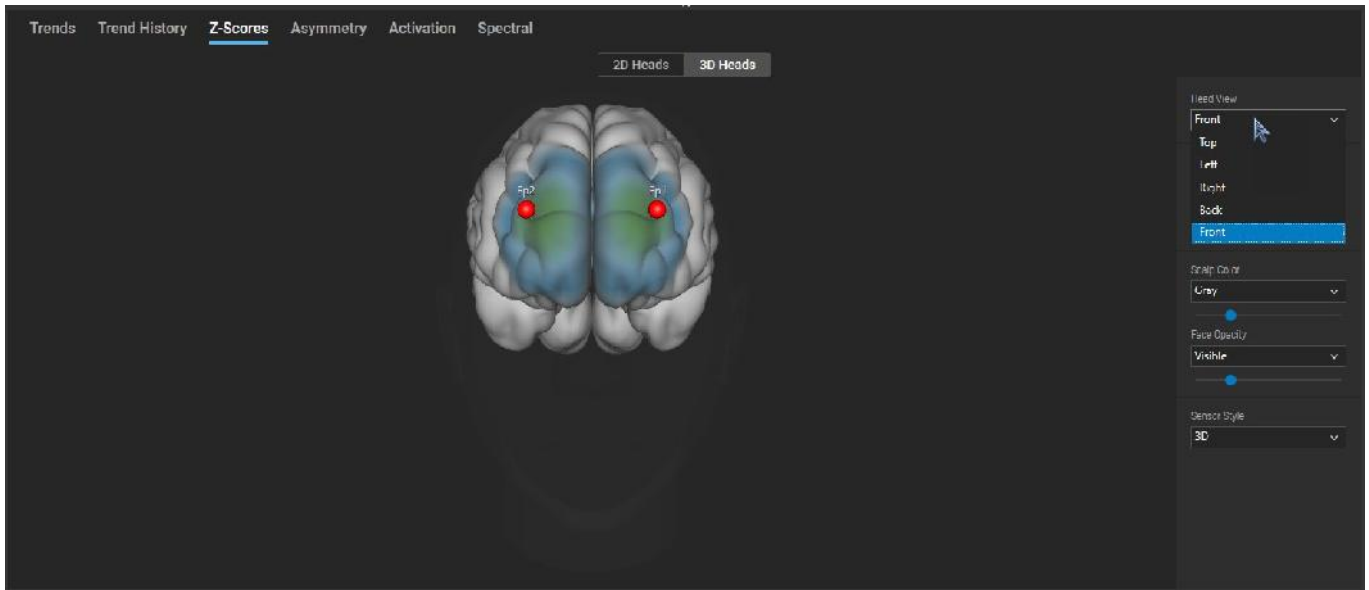
The **Face Opacity** option allows you to select from **Off (Color)** vs **Visible**.



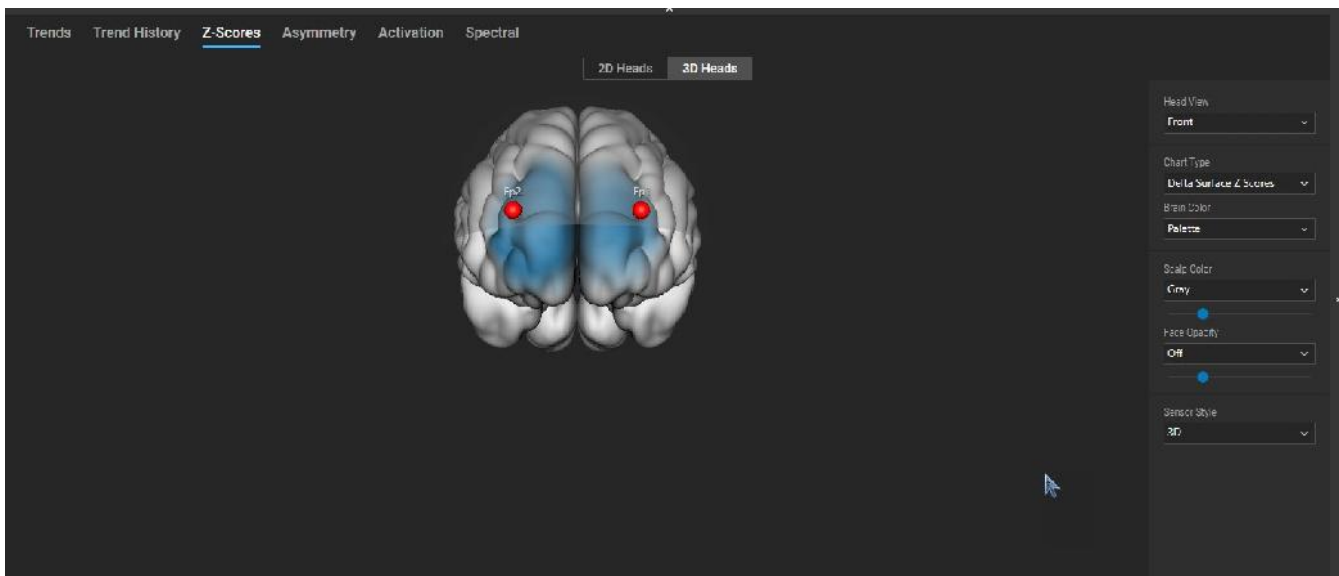
The **3D Heads Sensor Style** lets you select if you want to see the sensors in 2D or 3D



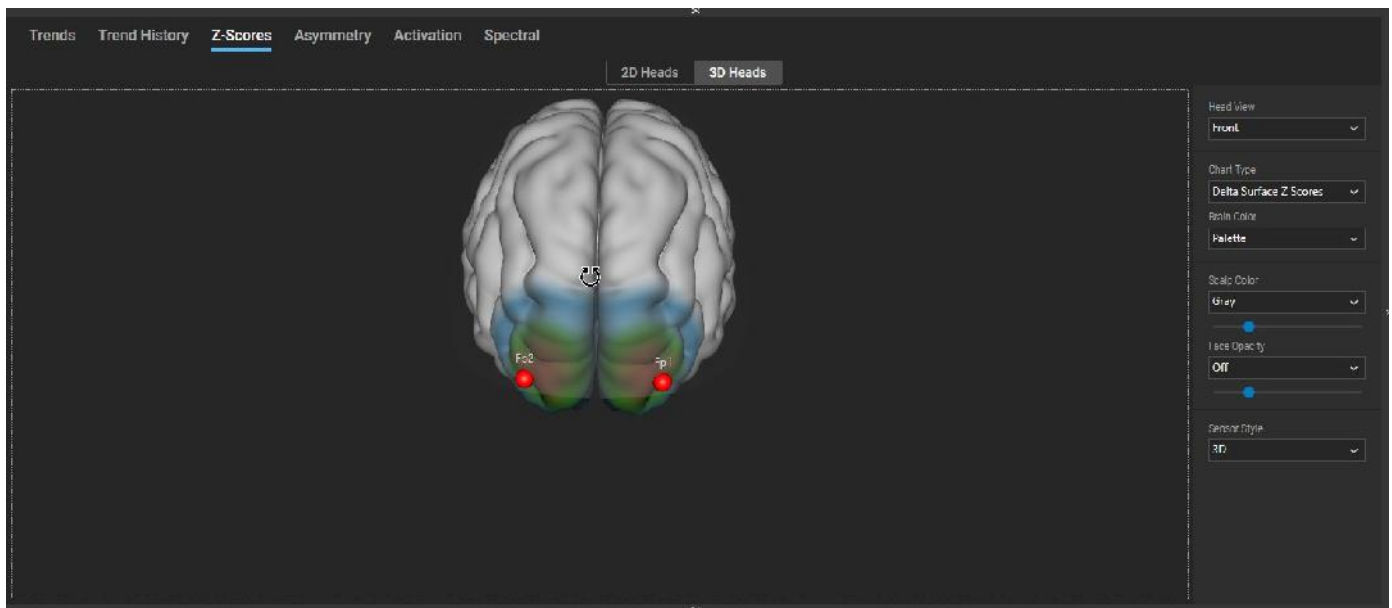
The **3D Head View** box permits you to have a variety of views using the 3D Head. Below the **Front** side is selected



In the example below, the **3D Front** view is displayed and the **3D Face Opacity** is switched Off

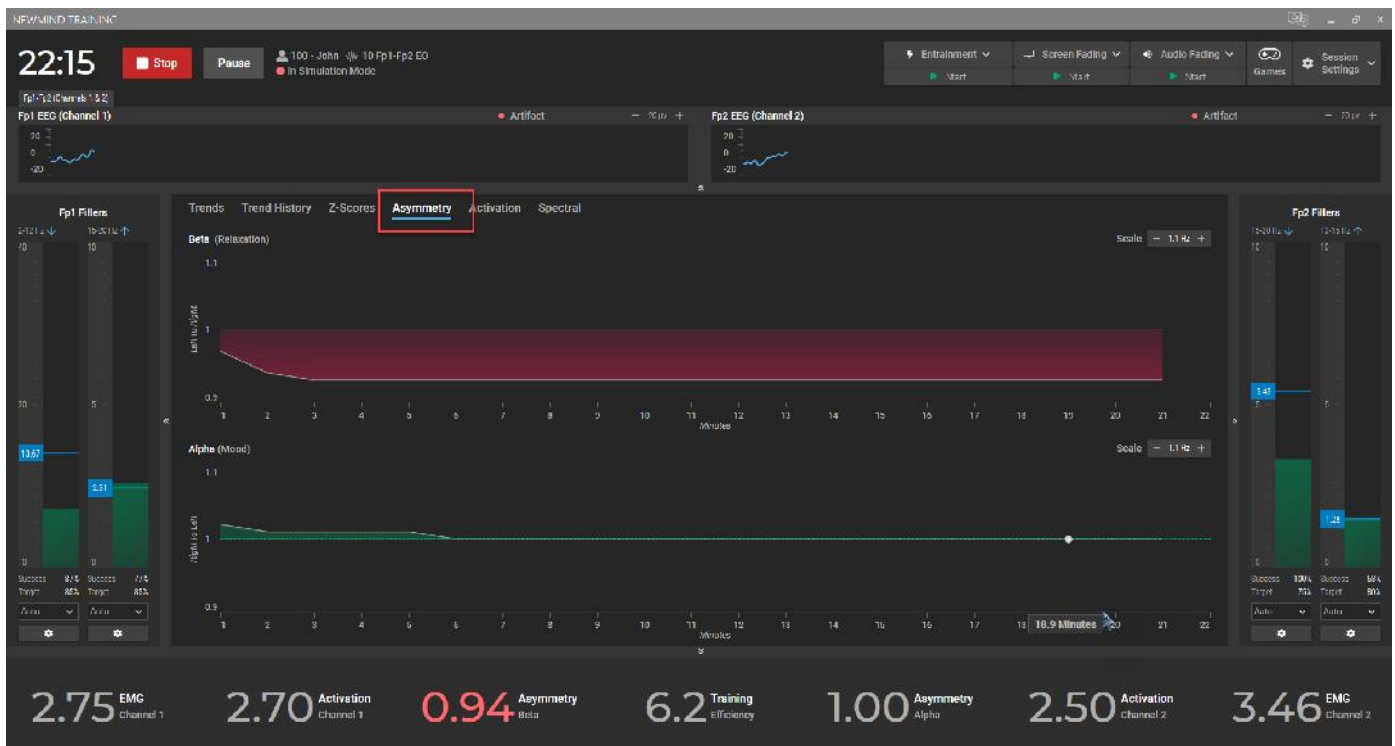


If you put your mouse pointer on the 3D Head and hold down the left mouse button, you can rotate the head in any direction. Below Front to Back movement is illustrated.



Asymmetry Screen

Clicking on the Asymmetry tab you can view the Beta and Alpha Asymmetry for the length of the session. Red in the graph indicates that the Asymmetry is out of normal range. Green in the graph indicates that the Asymmetry is within a normal range.

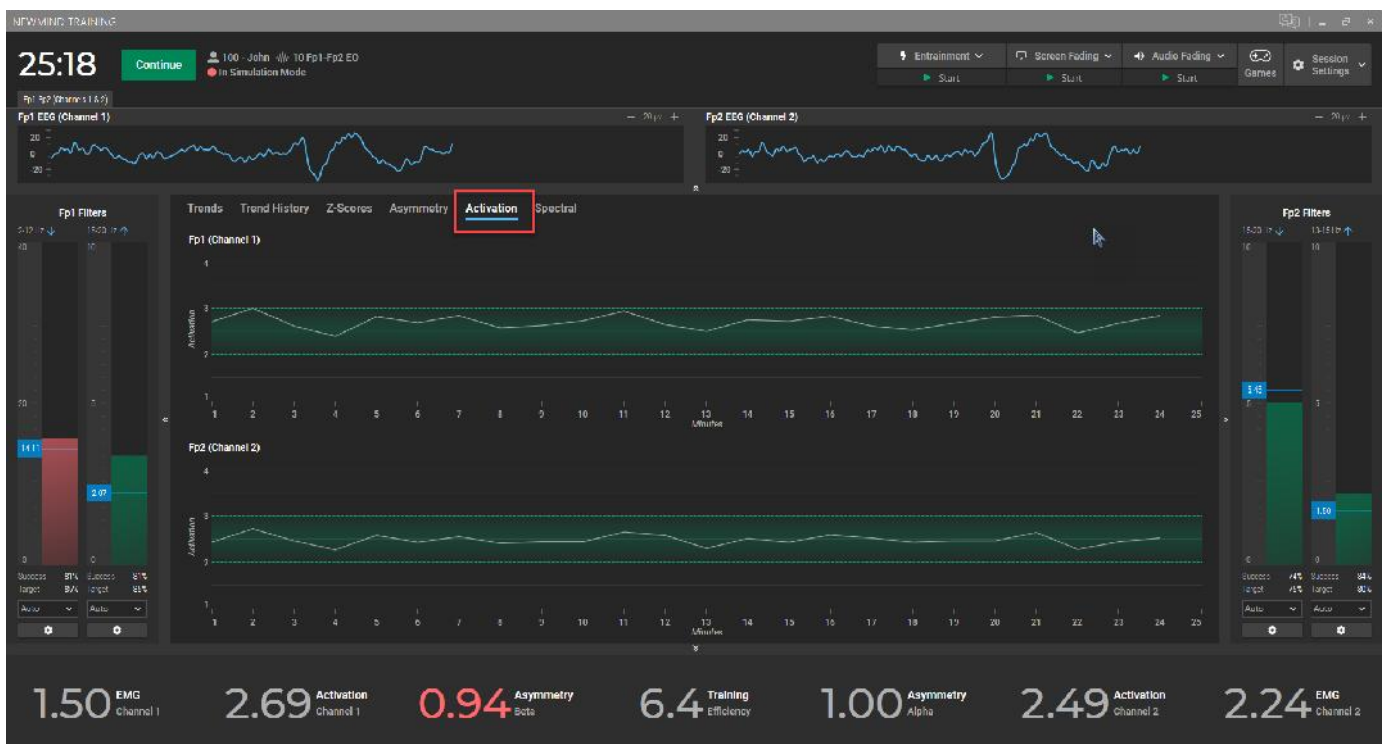


Activation Screen

The Activation Screen tracks the slow to fast wave ratio over the period of the session. The ideal range for activation is between 2 and 3.

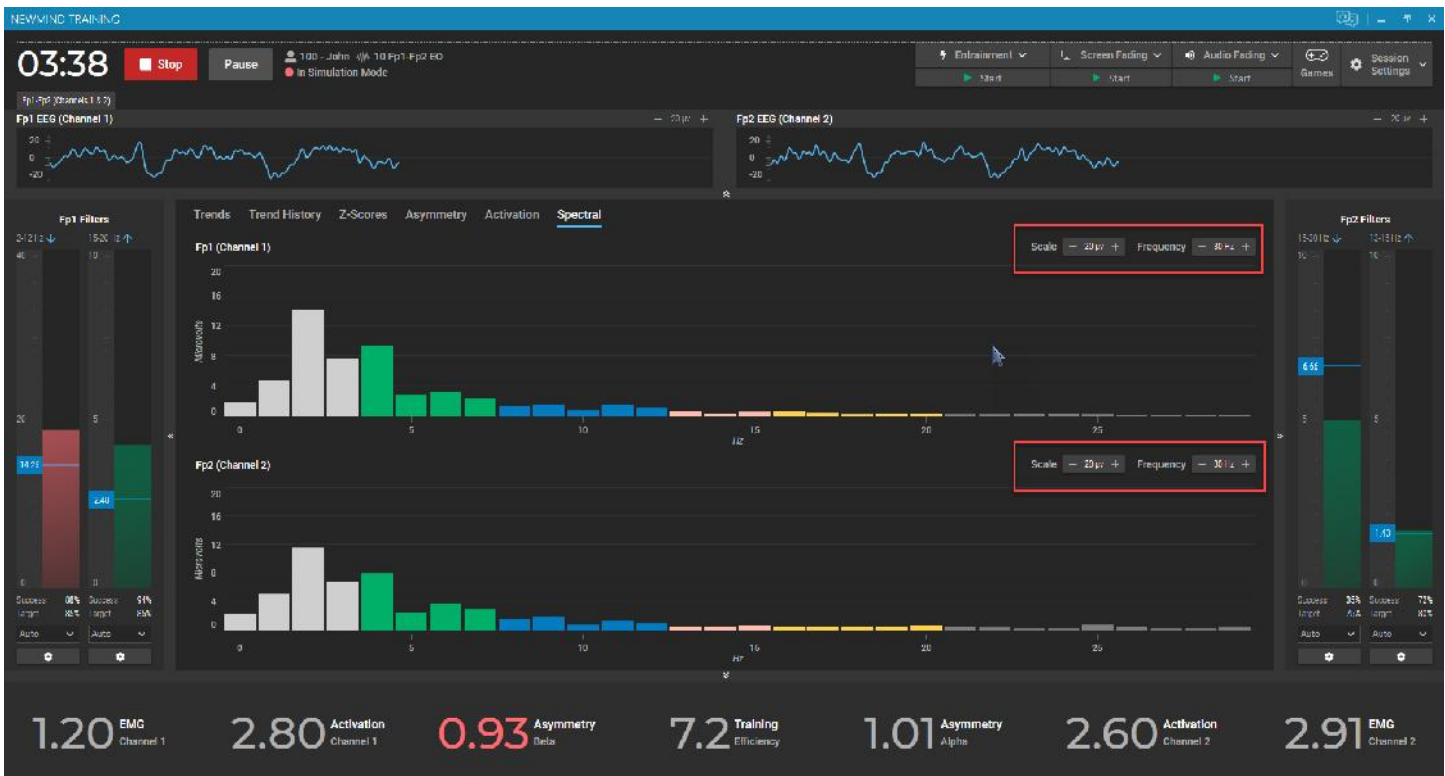
When values drop **BELOW 2.0** it is an indicator of excessive fast wave or **OVER-AROUSAL**. If the reading is **1.0 or lower**; the client/patient is overactivated and likely stressed and not training as well as he /she should. **NOTE: Scores lower than 1.0 may be the result of excessive EMG.**

When values are **ABOVE 3.0** it is an indicator of excessive slow wave or **UNDERAROUSAL**. If the reading is **3.5 or greater**; the client/patient is under-activated and not training as well as they should.



Spectral Screen

The spectral screen displays bin lines for each frequency band. The default setting will show from 1Hz to 30Hz. In the right hand corner of each spectral display you can adjust the power display in microvolts as well as the displayed frequencies up to 70Hz. This screen can be helpful to determine if you have excessive 60Hz electrical interference. To do this you will increase the frequency range to 70Hz. If you see any power being display at 60Hz (in North American) or 50Hz (in Europe) this is indicating that you have electrical interference from something near your equipment.



Photic Entrainment

The NewMind Training software has photic entrainment built into it. There are 4 options for using photic entrainment with your clients.

Manual: Adjustment of photic parameters are done manually during the training session.

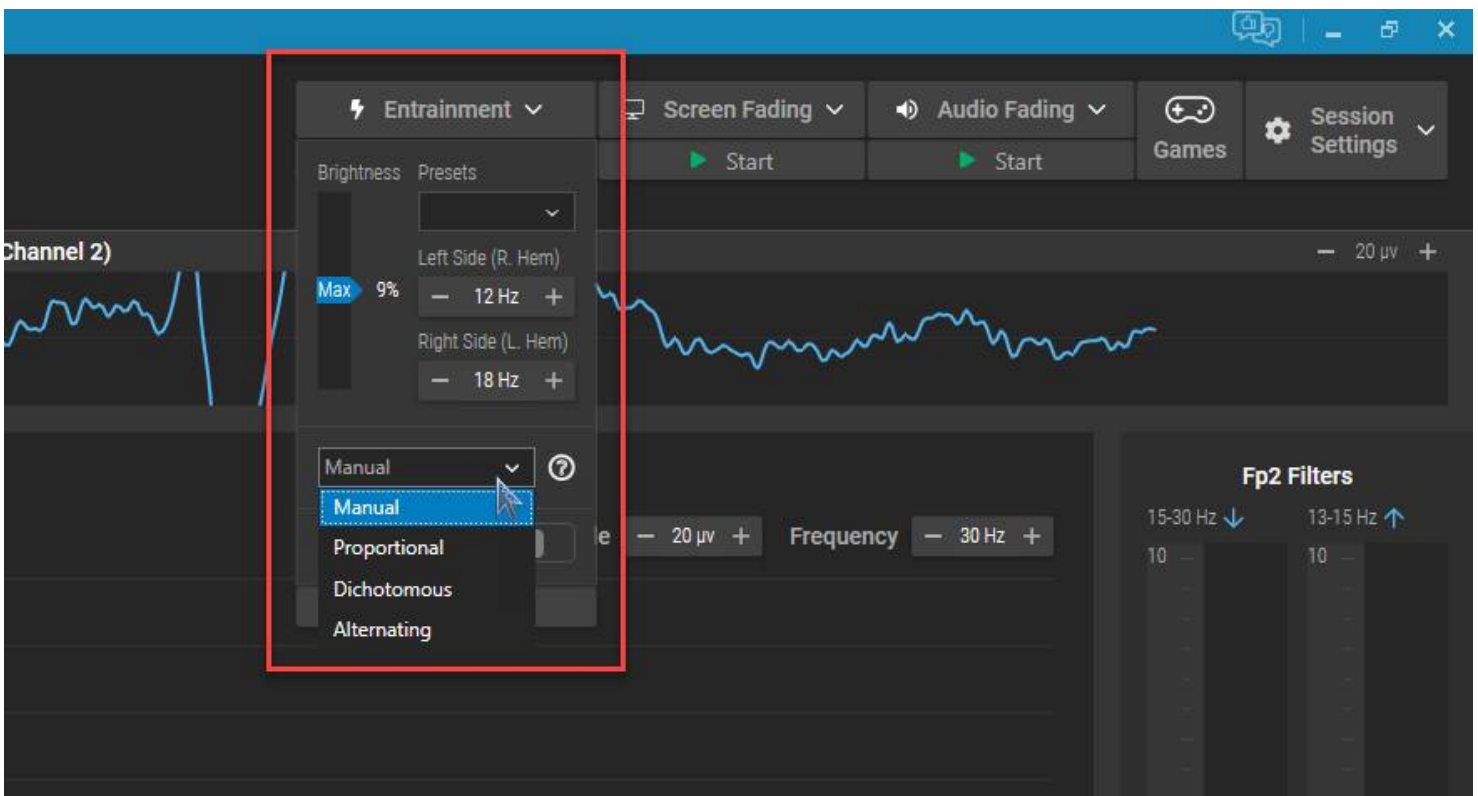
Proportional: The photic stimulation will incrementally increase as the amplitude training threshold is approximated and the exceeded and decrease incrementally as the amplitude falls below the training threshold.

Dichotomous: The photic stimulation will initiate as the training threshold is exceeded.

Alternating: Photic will shift back and forth rhythmically from the left visual field to the right visual field in one second intervals.

Video explaining Photic Entrainment can be viewed by clicking the link below

[Photic Entrainment—Dr Soutar](#)



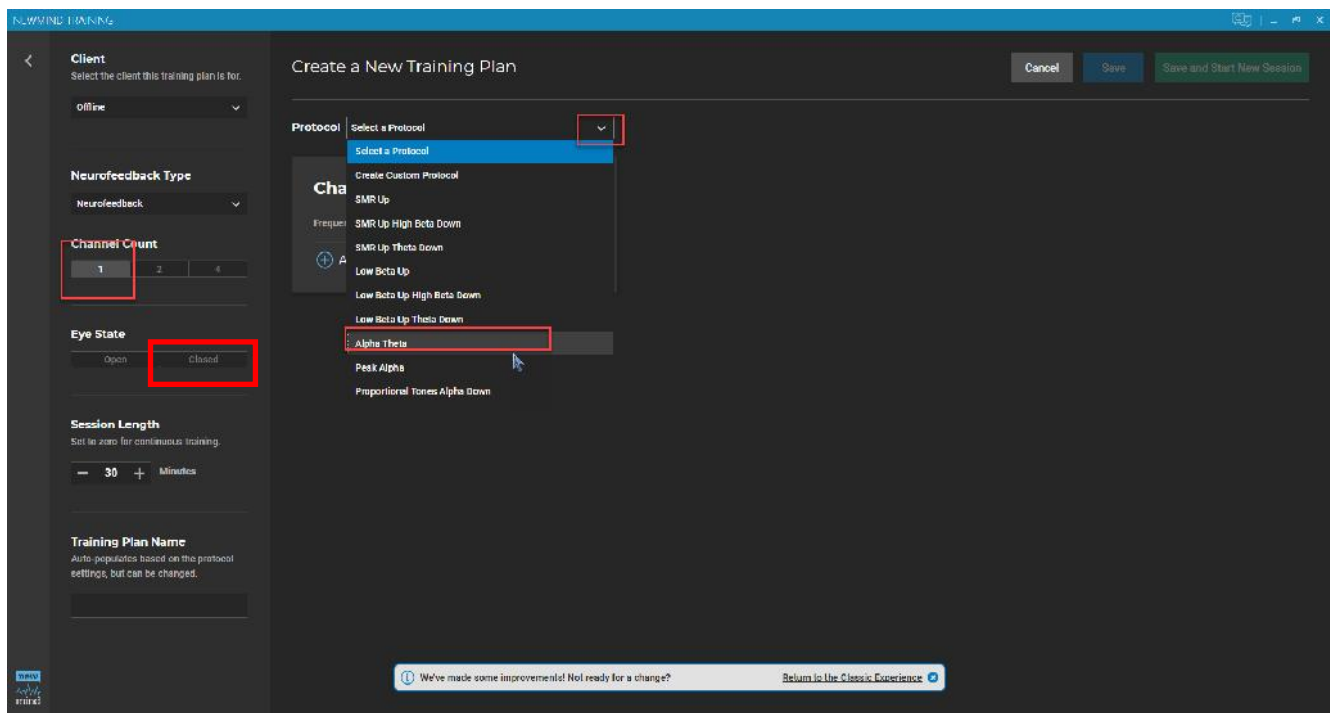
Alpha Theta Protocol

NOTE: Alpha Theta training is a highly specialized Neurofeedback protocol. It is important to get basic individualized mentoring before using this protocol. Failure to understand the many dynamics of Alpha Theta training may result in less efficient/minimal benefit training sessions.

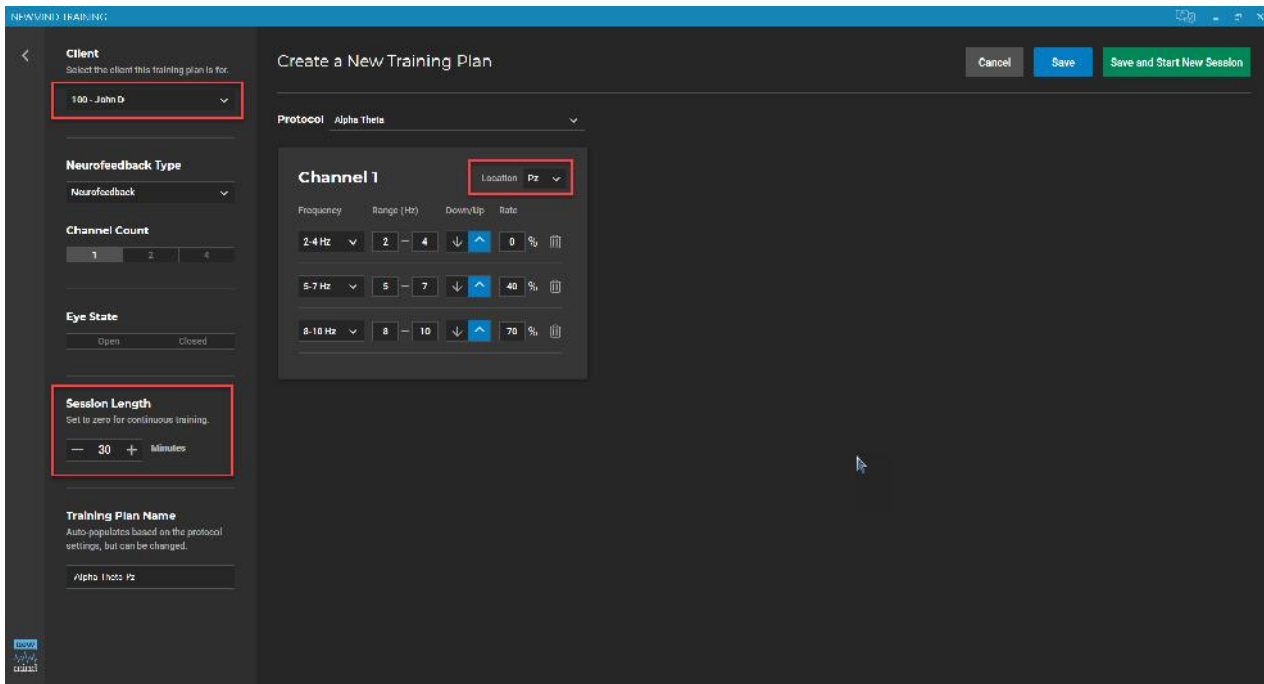
From the **Training Plans Screen**, click on the **New Training Plan** button



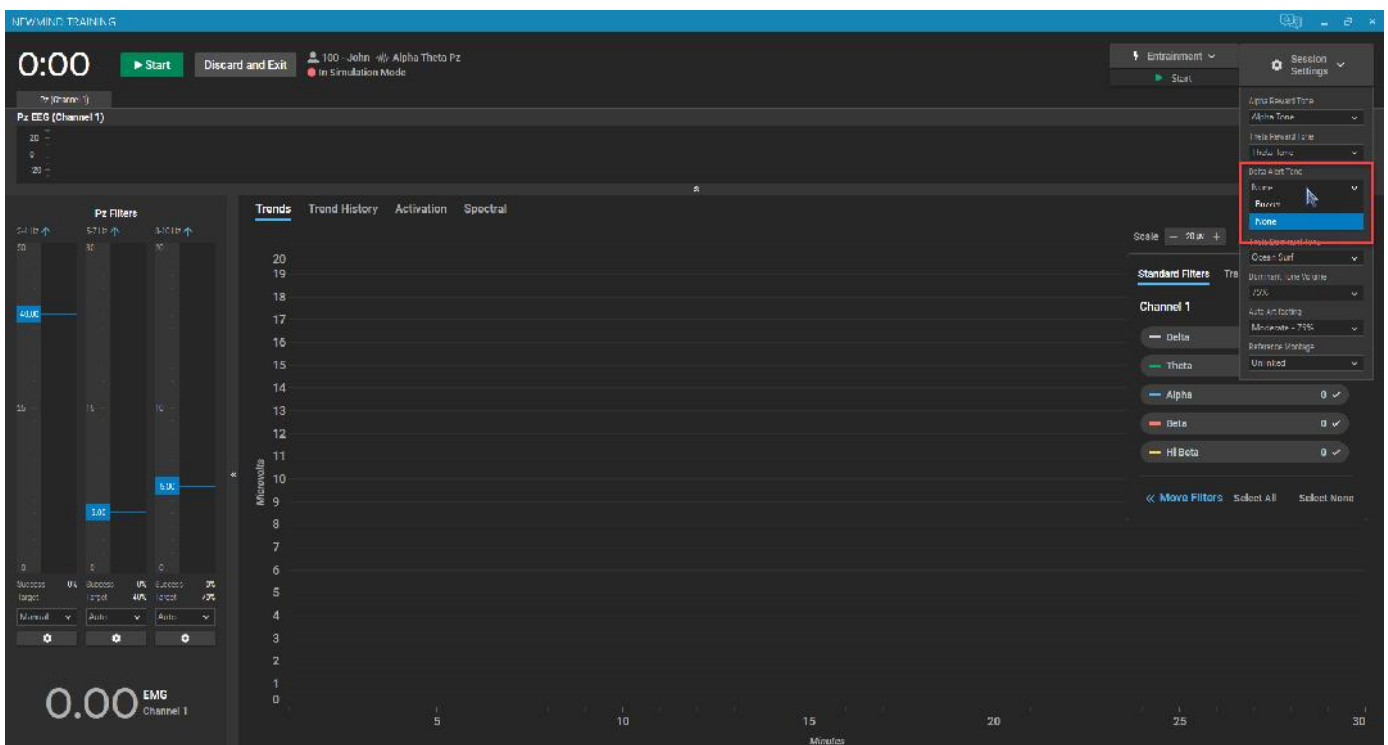
Under **Channel Count** select **1** and in the **Protocols for Channels 1 & 2** select **Alpha Theta** as illustrated below. Also, select **Closed** in the **Eye State** section.



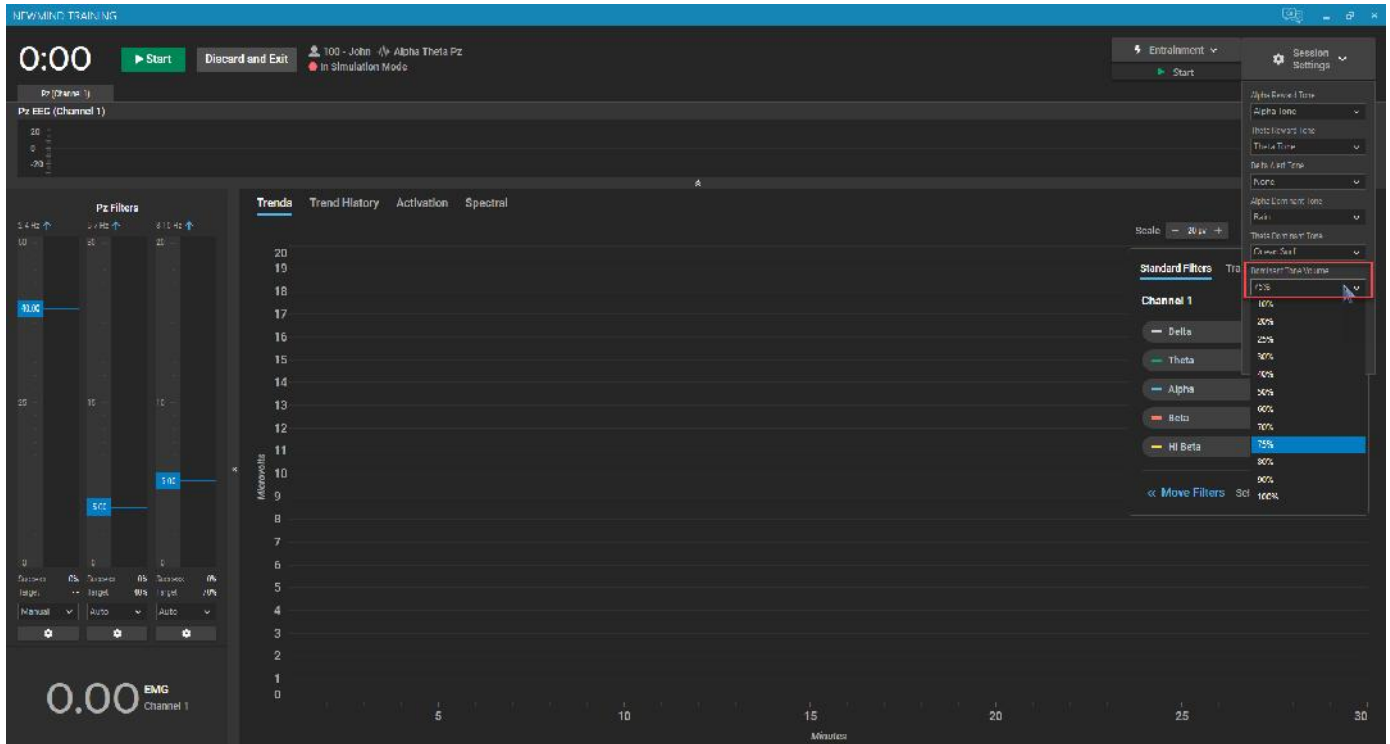
Then **under location select Pz**; then **select the client you would like to assign the training plan to in the Client Section in the upper left of the screen, adjust the length of the session under Session Length (if you want to time limit the session) and click on Save & Start to run the protocol or Save if you do not intend to use it immediately with the client.**



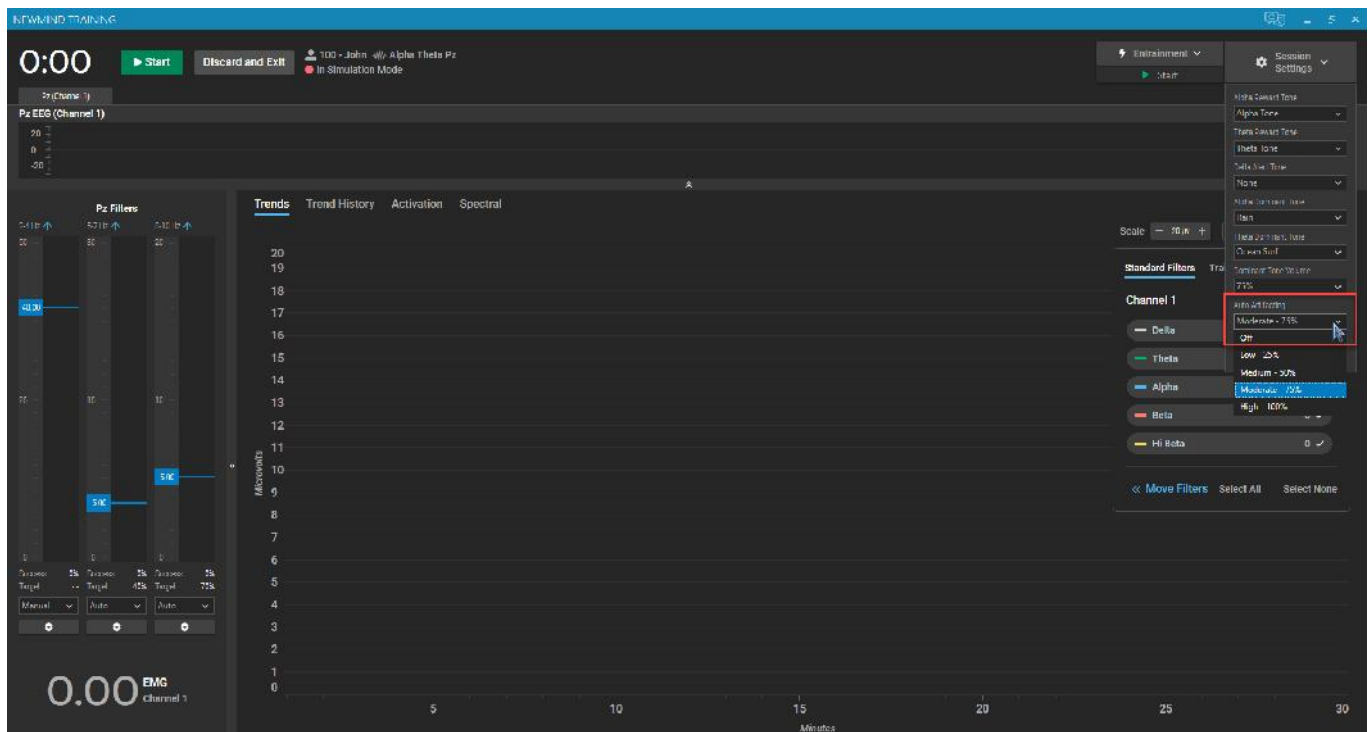
On the training screen, you can **select Buzzer in the Delta Alert Tone** and during the session a buzzer will sound if the client/patient begins to fall asleep (see below).



Under **Dominant Tone Volume** you can select a percentage of the volume for **Rain** and **Ocean Surf** sounds as illustrated below. The default setting is 75%.



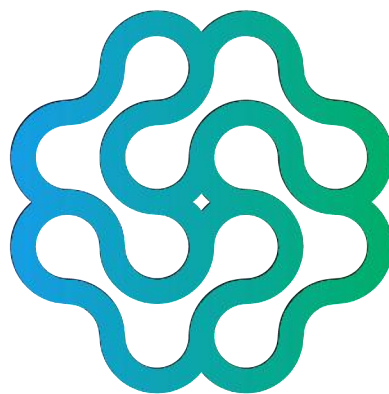
You can also select the level of **Auto-Artifacting** as shown below.



NOTE: Over the course of time New Mind Technologies will be updating the features of Software and New Mind Mapping System. This manual will be updated as new additions, features and changes take place in both formats.

If you have further questions or problems with your New Mind Home Trainer or New Mind Home Training Software, please contact New Mind Technologies at (844) 405-3553, or E-mail New Mind Technologies at:

support@newmindtech.com



NewMind