

Power Point Manual

Get On The
BUS



BrainMaster
Universe
Simplified



“Sharp”
Level 2

SHARP

Level 2

- How can I modify the Sharp Settings to alter automatic thresholding settings and to change to manual thresholding?

All protocols are for demo and research purposes only. Clinicians must determine protocol choices. All protocols must be used within scope of practice and scope of competence.

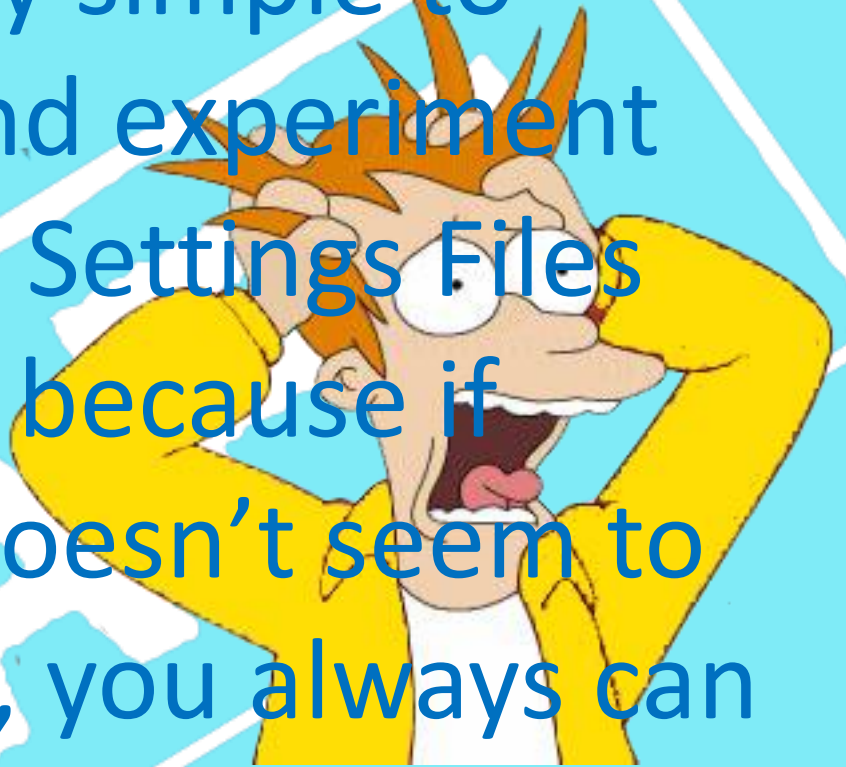
SHARP

Level 2

- The Level 1 Base Setting for the Sharp Protocol includes the electrode placement of Cz to train down a broadband (1Hz to 38Hz) to help reduce brain fog.
- Lets learn how to change the way in which BrainAvatar automatically updates the threshold and finally to change from Automatic Thresholding to Manual Thresholding.

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FIRST: It is so very simple to make changes and experiment with BrainAvatar Settings Files without concern because if something just doesn't seem to work as planned, you always can reload the original Settings File you downloaded to your system.



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Consider manipulating the settings in your working folder as a sandbox. You can always replace it with the original setting file.



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Level 2

Lets Begin

- Make Sure the Atlantis Amplifier is plugged in.

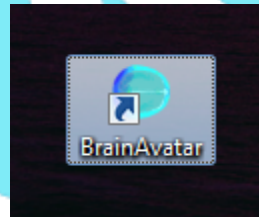


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Level 2

- Open BrainAvatar by double-clicking the BrainAvatar Icon

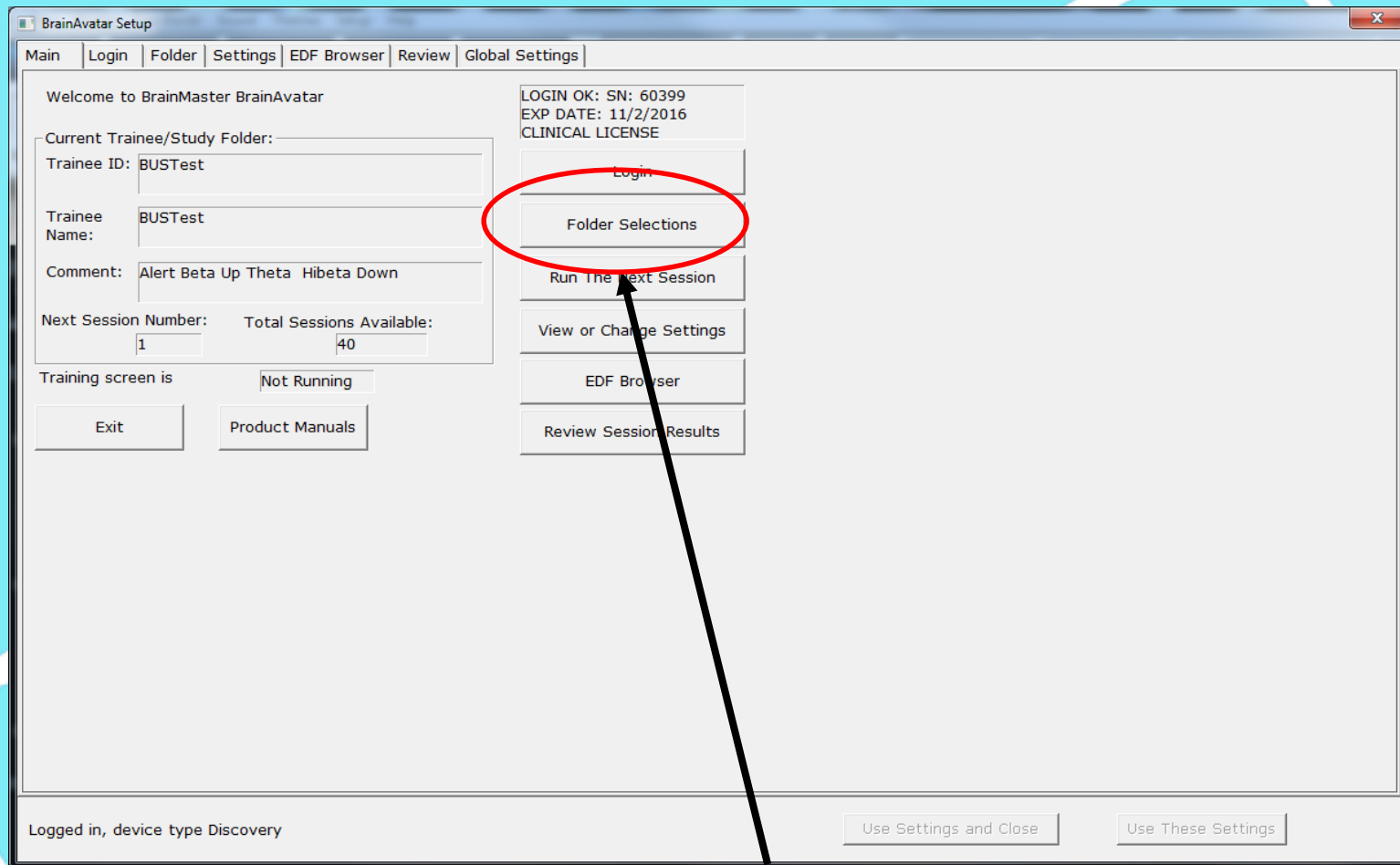


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- The Select Folder Screen will appear.
- By now you should know how to either create a new client folder or recall an existing client folder.
- For the purposes of this exercise let's open and utilize the "BUSTest" Folder which may already be resident on your system. If not, then create one.

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- The BrainAvatar Setup Window will Appear



- Click “Folder Selections”.

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- The Select Folder Screen will appear.

BrainAvatar Setup

Main | Login | Folder | Settings | EDF Browser | Review | Global Settings

Select Folder | Create Folder | Folder Notes | Session Librarian | Edit Folder Info.

Select Folder: (you may double-click to select)

Study Name	Birth Date	Sess	Max	Comment	Technician	Physician	Trainee Name	Created	Modified
..									
BUSTest	2000-7-4	40		Alert Beta Up T...	EEG tech		BUSTest	2016-8-3	2016-8-3

Study Name (Trainee ID): BroJad4chPZOKP3P4O1O2

Trainee Name: BroJad4chPZOKP3P4O1O2

Comment: comment

Sessions Used: 4

Max Sessions: 40

Session Librarian

Administer Session Genie | Push Current Study to Server and Delete | Archive Current Study | Archive Current Study and Delete

Create New Folder

Folder Notes

Edit Folder Info.

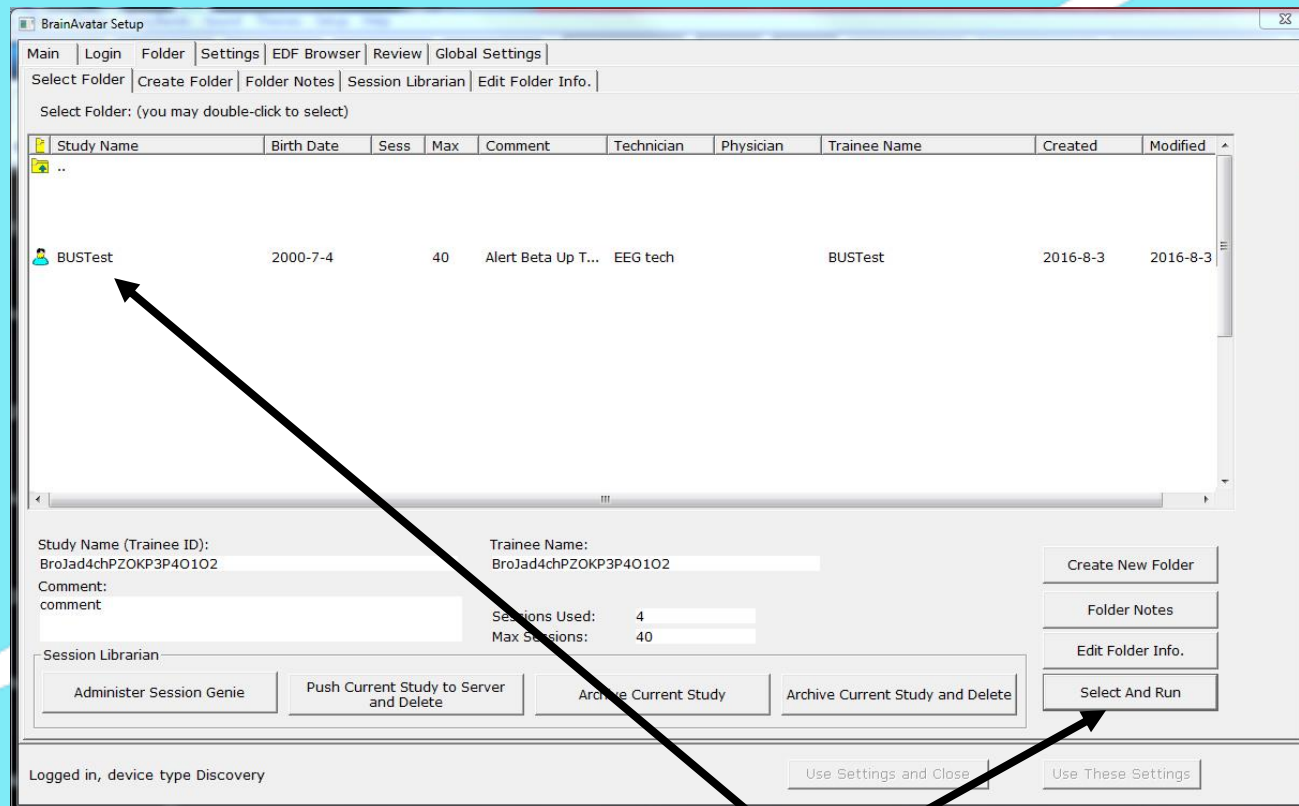
Select And Run

Logged in, device type Discovery

Use Settings and Close | Use These Settings

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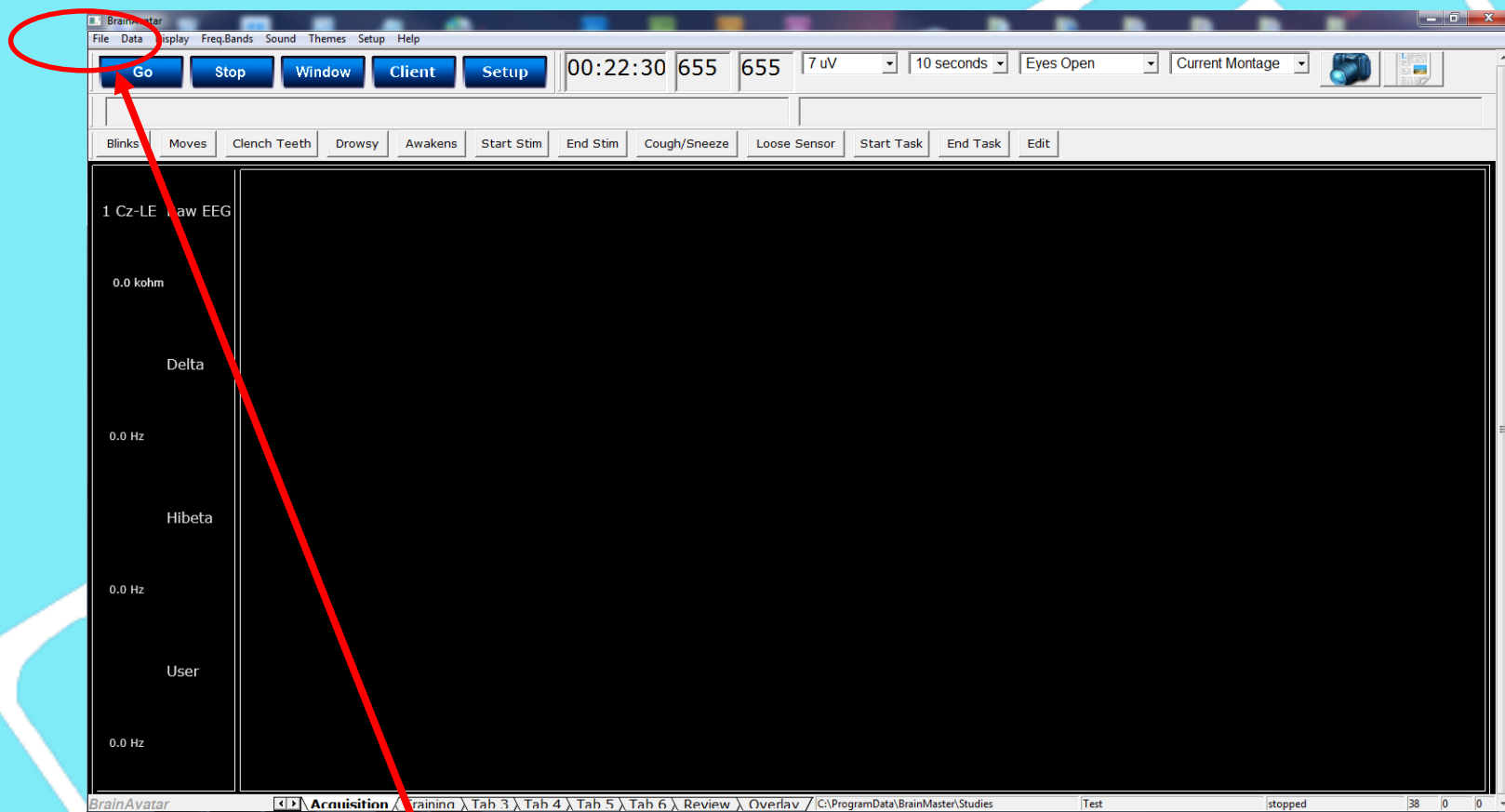
- The Select Folder Screen will appear.



- Click the Study (Folder) you would like to open (in this case BUSTest) and then click “Select and Run”.

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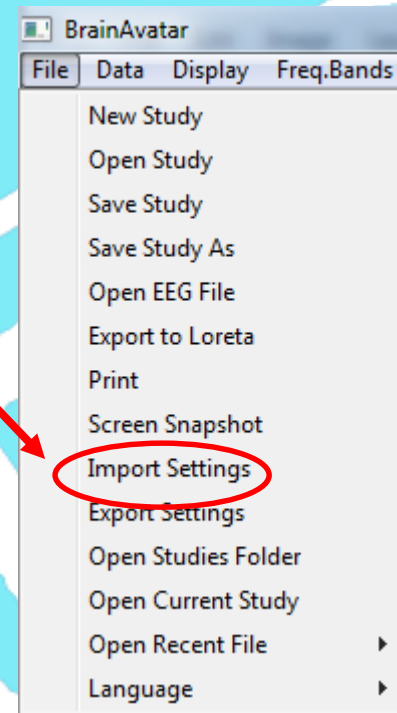
- The BrainAvatar Acquisition Screen is illuminated. Let's load the original Sharp Level 1 Setting File.




- Click “File” from the Main Menu at the top.

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- Next click “Import Settings”.



- Scroll to find the original Sharp Level 1 File and double click it.

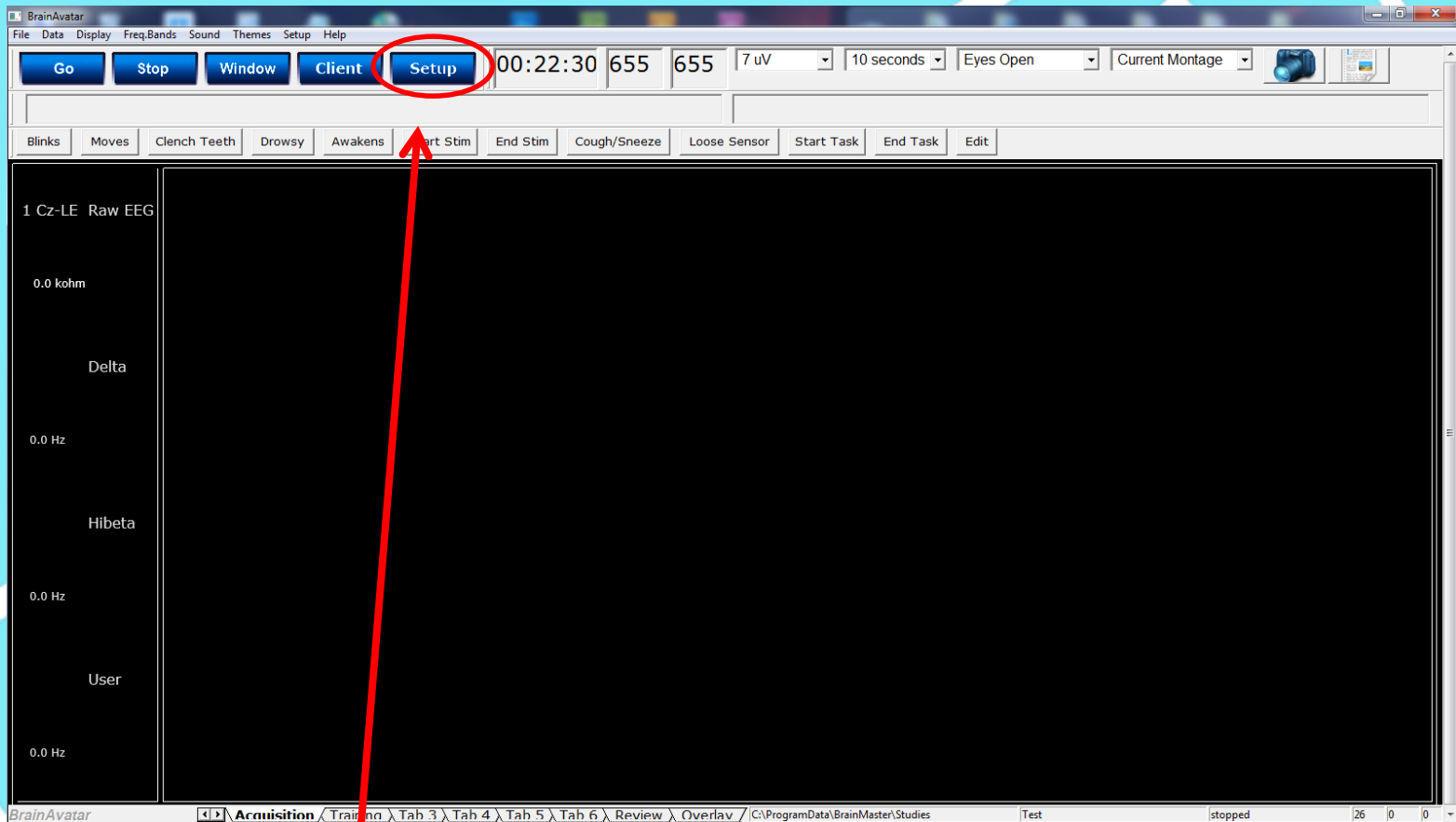
Name	Date modified	Type	Size
 0701001Sharp.bdb2	1/23/2016 5:56 PM	BDB2 File	142 KB

- The original Sharp Level 1 setting is imported into the Client’s Study and is now ready for modification.

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The Protocol is now ready for Modification

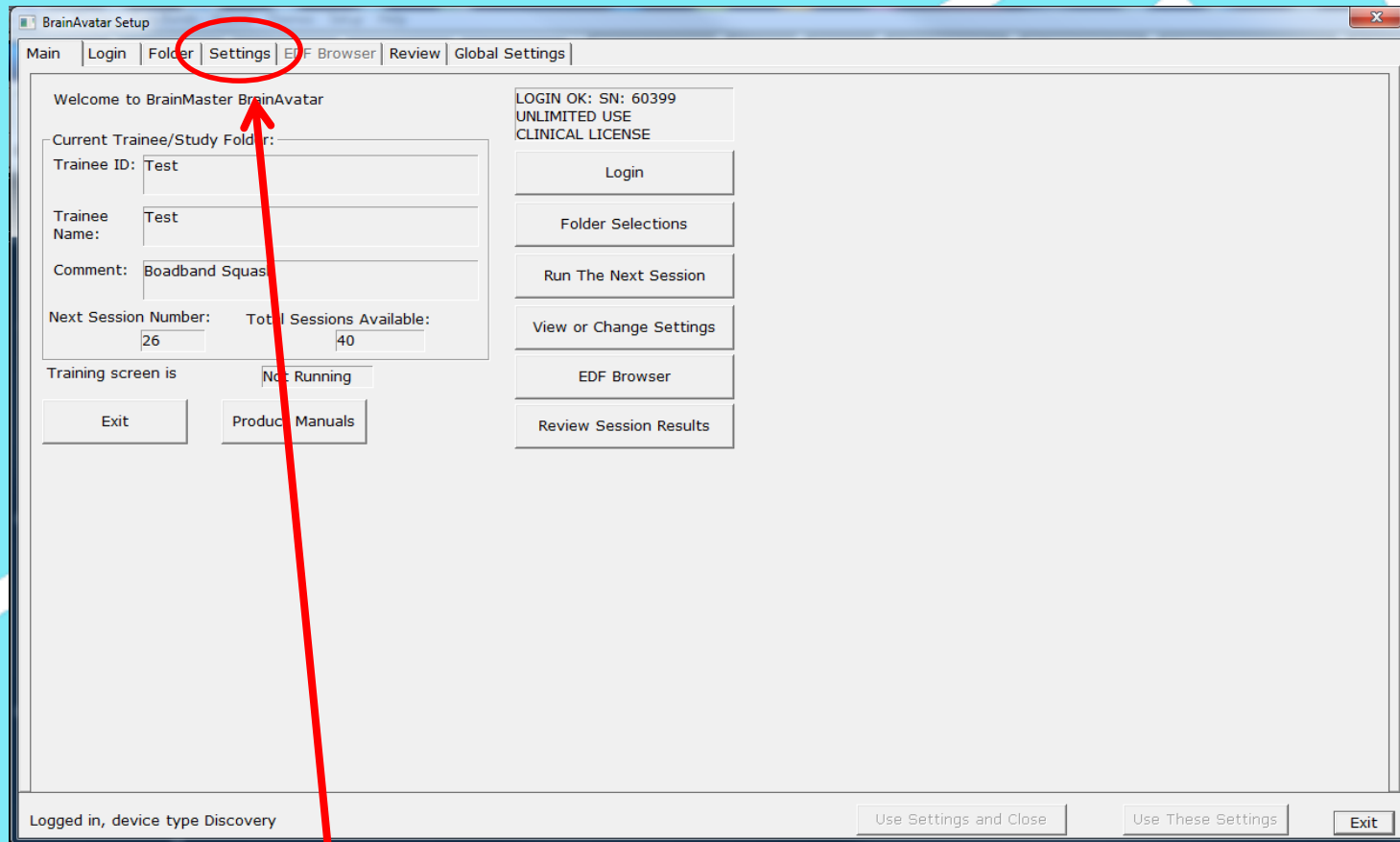


- Click “Setup”.

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The Protocol is now ready for Modification

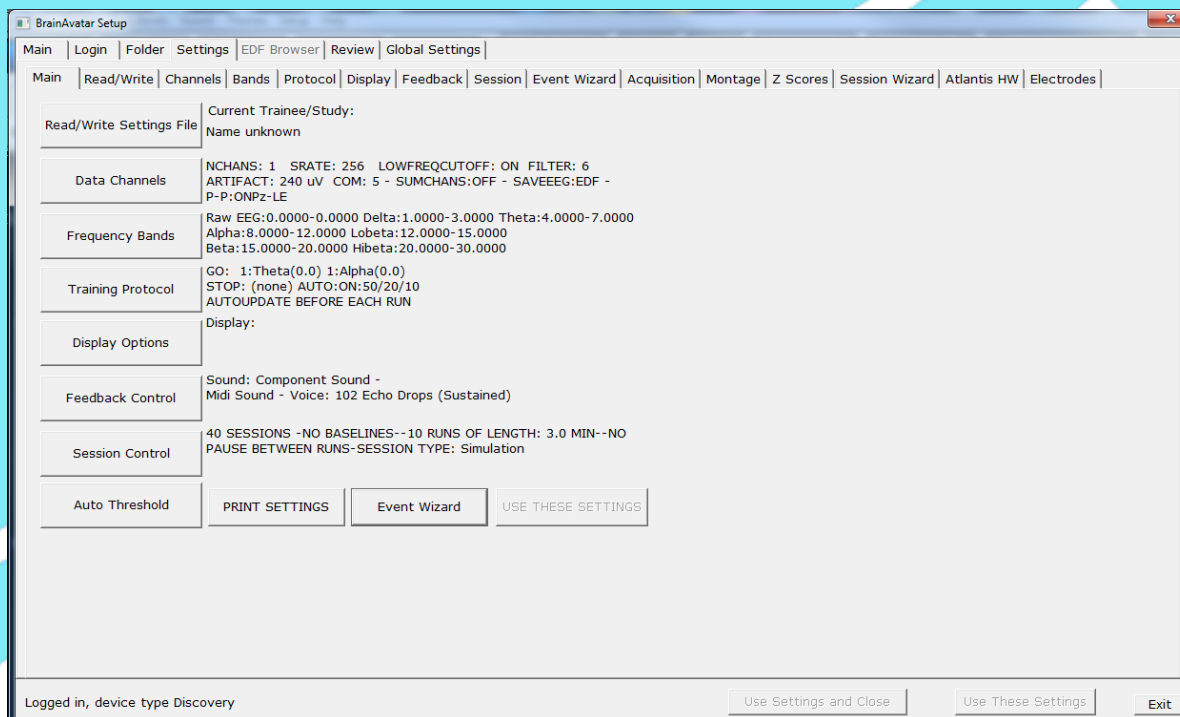


- Click “Settings”.

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The Protocol is now ready for Modification

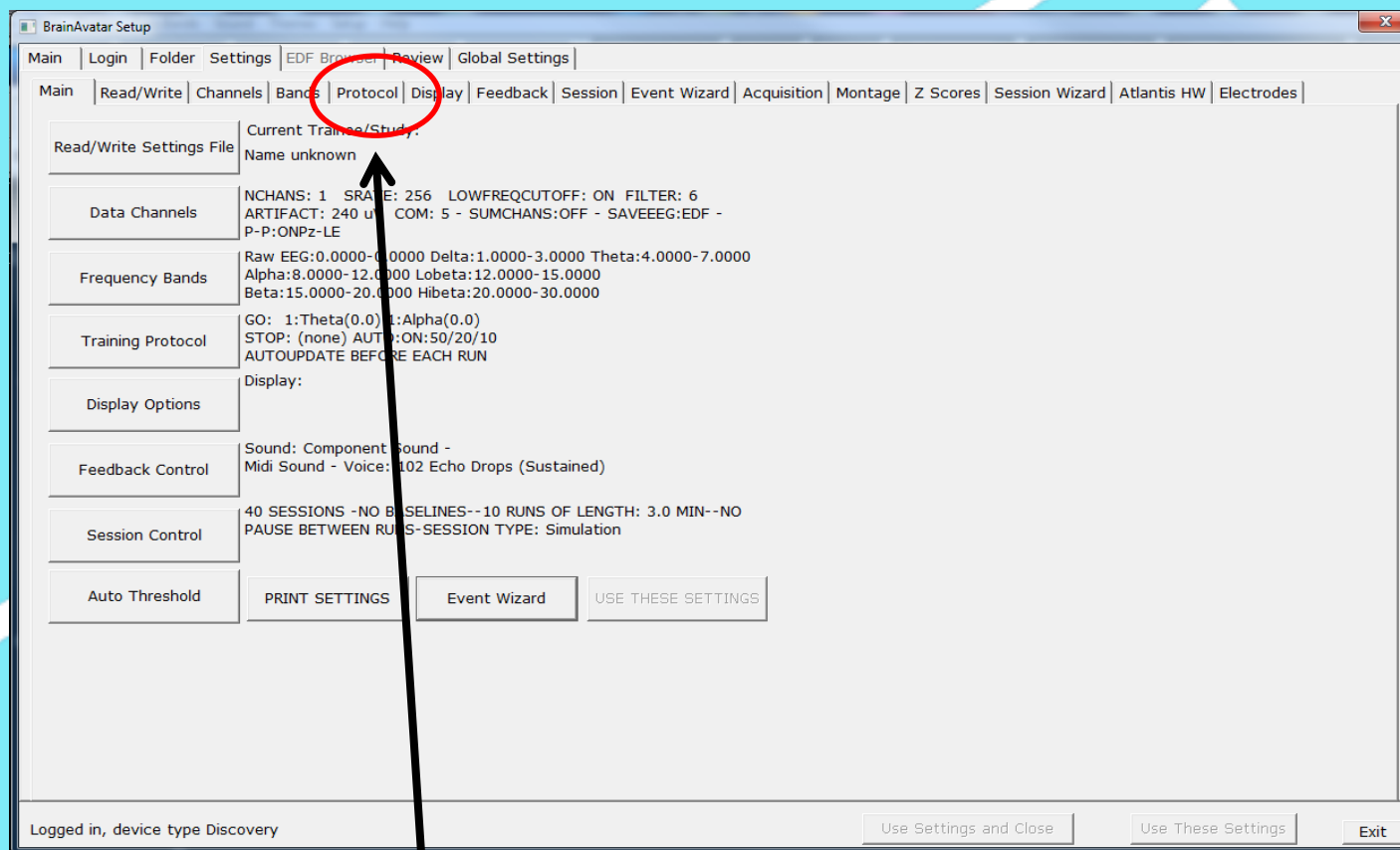


YOU ARE NOW ABOUT TO ENTER THE “BRAIN CENTER” OF THE BRAINAVATAR PROGRAM. ANY HAPHAZARD MODIFICATIONS HERE WITHOUT KNOWLEDGE MAY CAUSE UNPREDICTABLE RESULTS. THIS INSTRUCTION MANUAL WILL GIVE YOU THE PROPER KNOWLEDGE TO ALTER THESE CONTROL SCREENS WITHOUT CONCERN. AGAIN, YOU CAN ALWAYS INSTALL THE ORIGINAL SETTING FILE IF NECESSARY.

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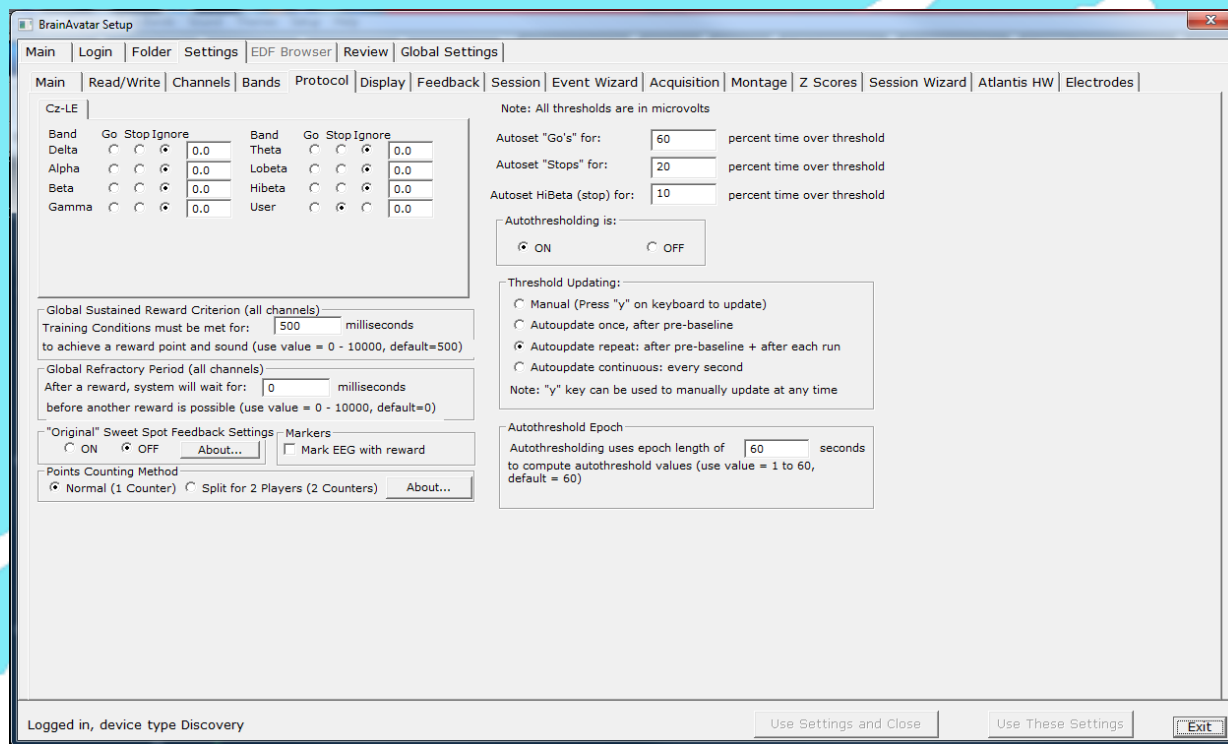


Click "Protocol".

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The Protocol is now ready for Modification



You are now viewing the Protocol Screen. Before we start learning to use this screen you should learn the distinction between the use of the BrainAvatar “built in” digital filters and the use of the Event Wizard.

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The Protocol is now ready for Modification

One of the greatest advantages of using the Brainmaster System is since its inception in 1995, Brainmaster Technologies has kept up with the evolution of the Biofeedback and Neurofeedback field and has included details of the majority of the modalities in one simple “easy to use” package.

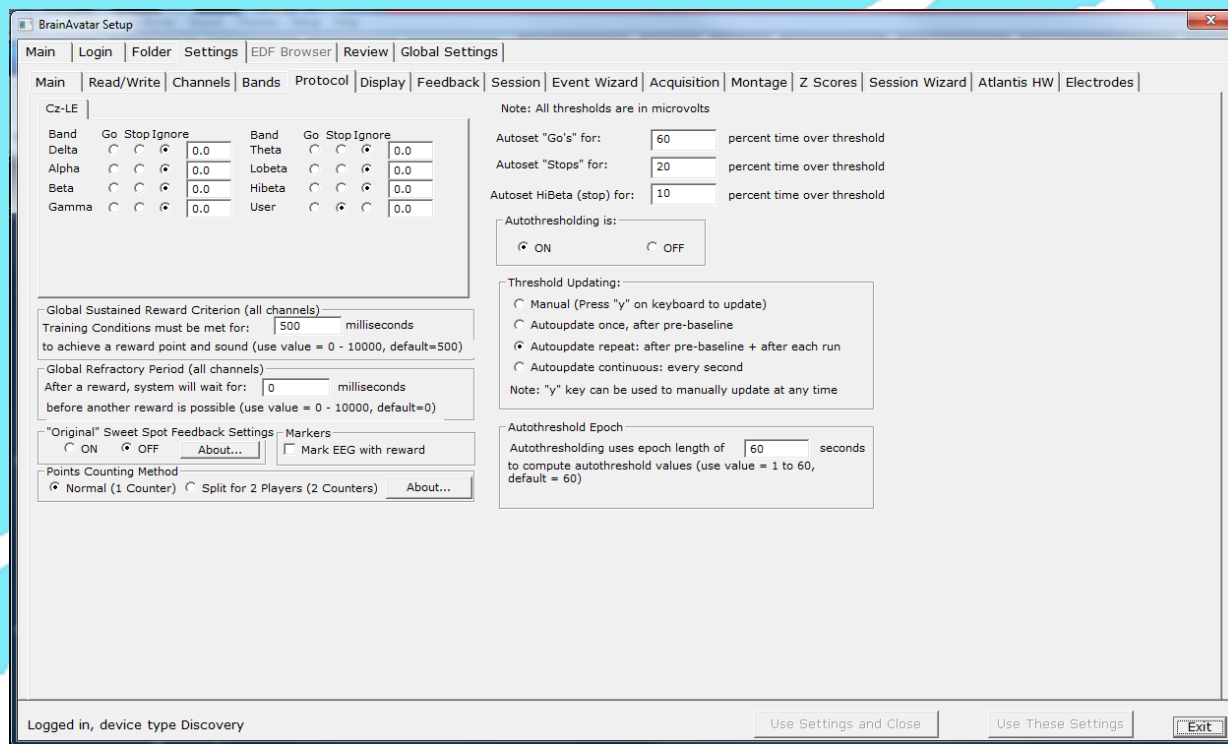
In the beginning when most systems utilized only a one or two channel training paradigm, there was only a real need to perform 5 events. These events included the operation of three training bands with thresholding (typically theta, beta and hibeta), the accumulation of success points and an event to drive the feedback. Early on, the use of Brainmaster Technologies patented digital filtering controlled and monitored these events. They gave control of this to the neurofeedback professional through this “Protocol Screen” and the first 5 events of the “Event Wizard”.

As neurofeedback evolved it became necessary to add events, the “Event Wizard” kept pace and now offers control of up to 16 events with the possibility of more being offered at a future date if the need arises.

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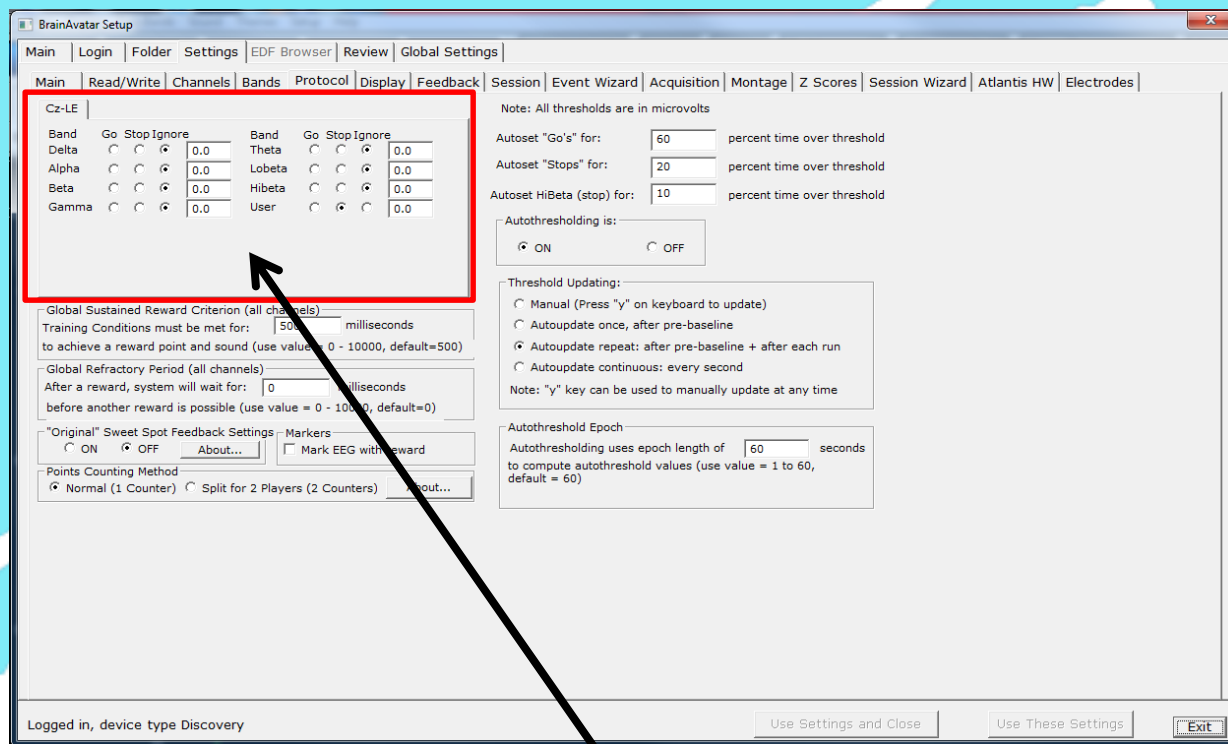


So the point is that the "Protocol Screen" controls up to three frequency bands of the built in digital filtering for up to 19 channels.

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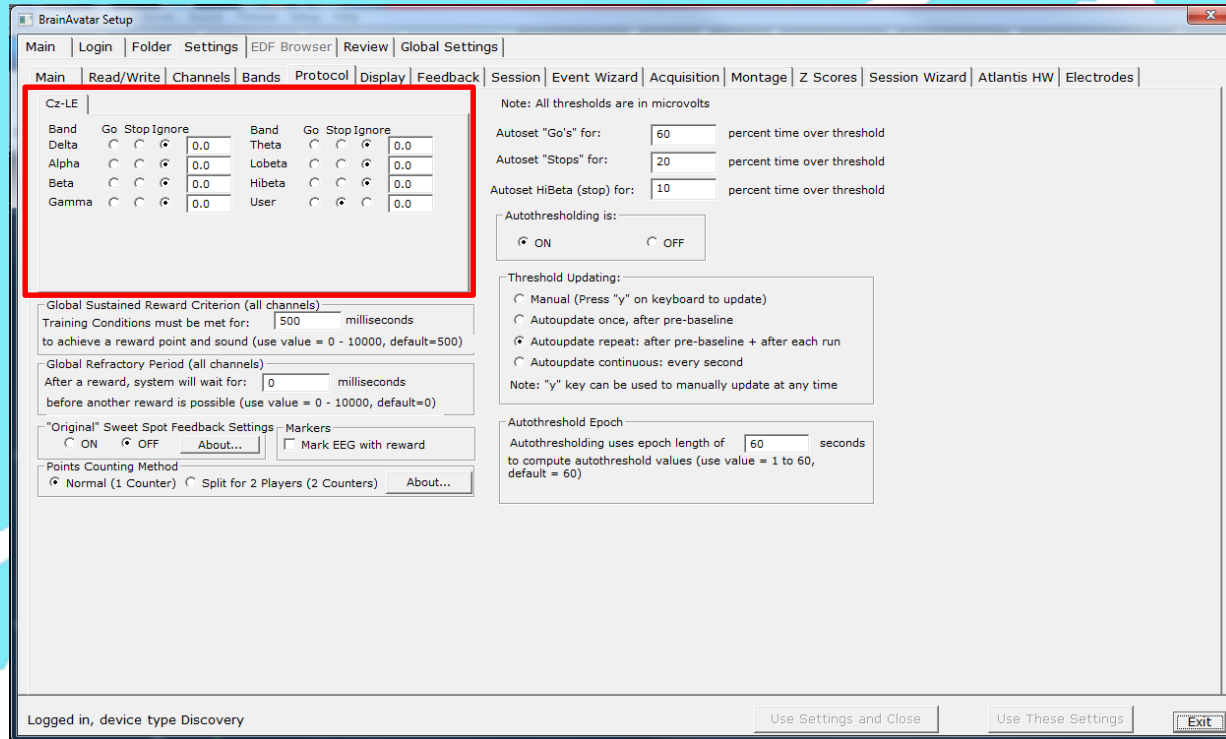


The box in the upper left corner controls the bands to be trained and whether they are to be rewards or inhibits. A reward band is defined as a “Go” and inhibit band is defined as a “Stop”. If a band is not to be used then “Ignore” is selected.

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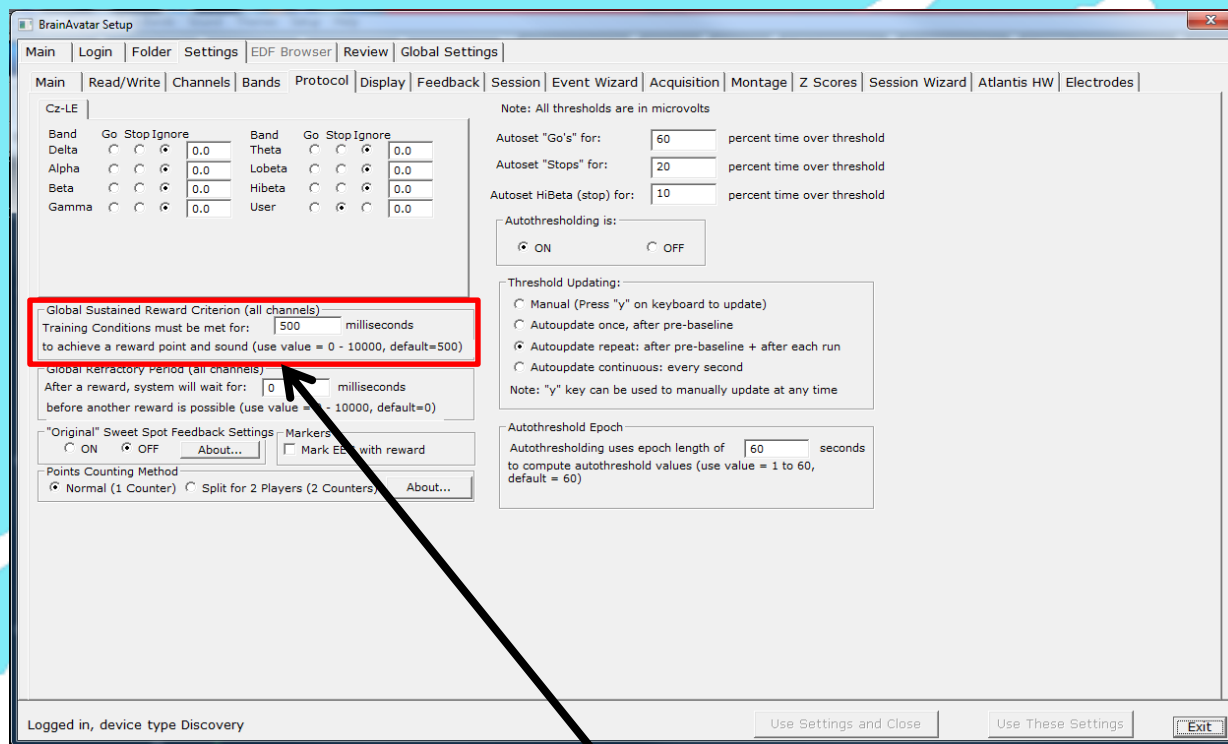


Notice for the Sharp Protocol User is actually being downtrained ("Stop"). Delta and HiBeta are also inhibited. However in this protocol Delta and Hibeta thermometers are used to provide a warning signal for impending drowsiness or anxiety and is controlled by the Event Wizard and not by the Brainmaster digital filtering. This concept will be covered in a Level 3 program on the use of the Event Wizard.

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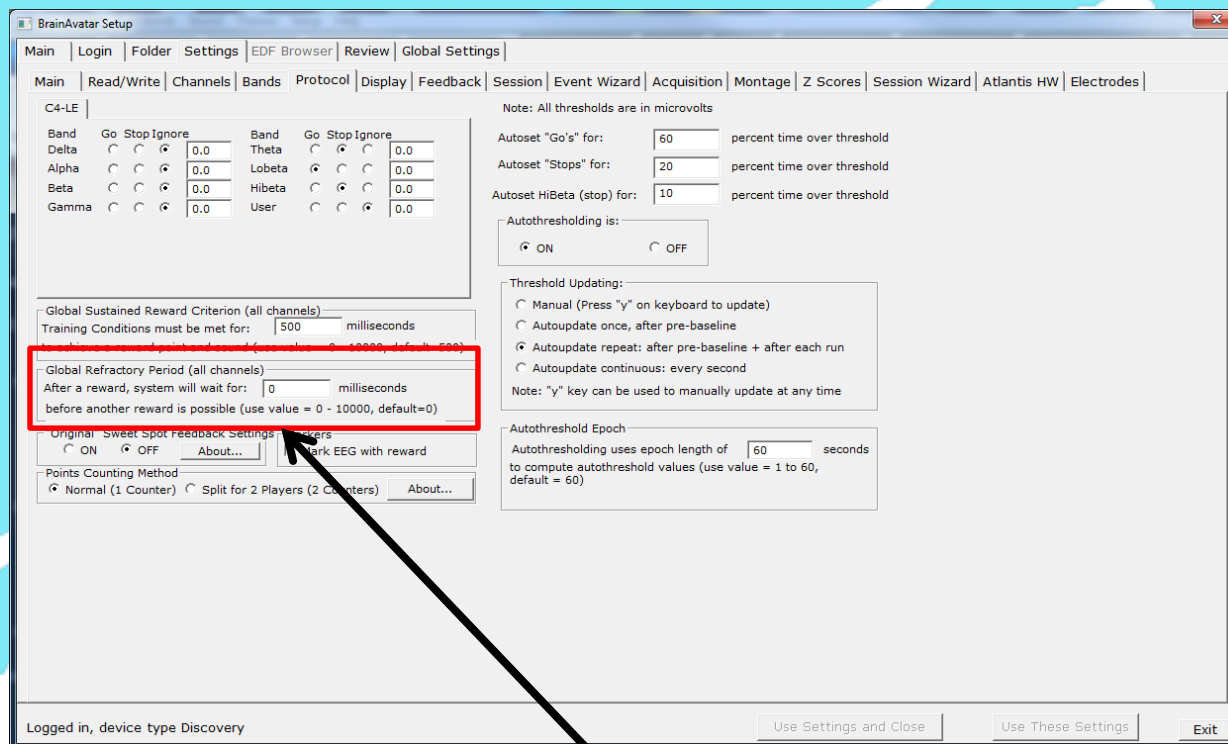


Global Sustained Reward Criterion is set for 500 milliseconds (1/2 a second). This means a reward level has to be maintained over a threshold for 1/2 a second before feedback takes place. Remember, if you want to change this the value entered has to be in milliseconds.

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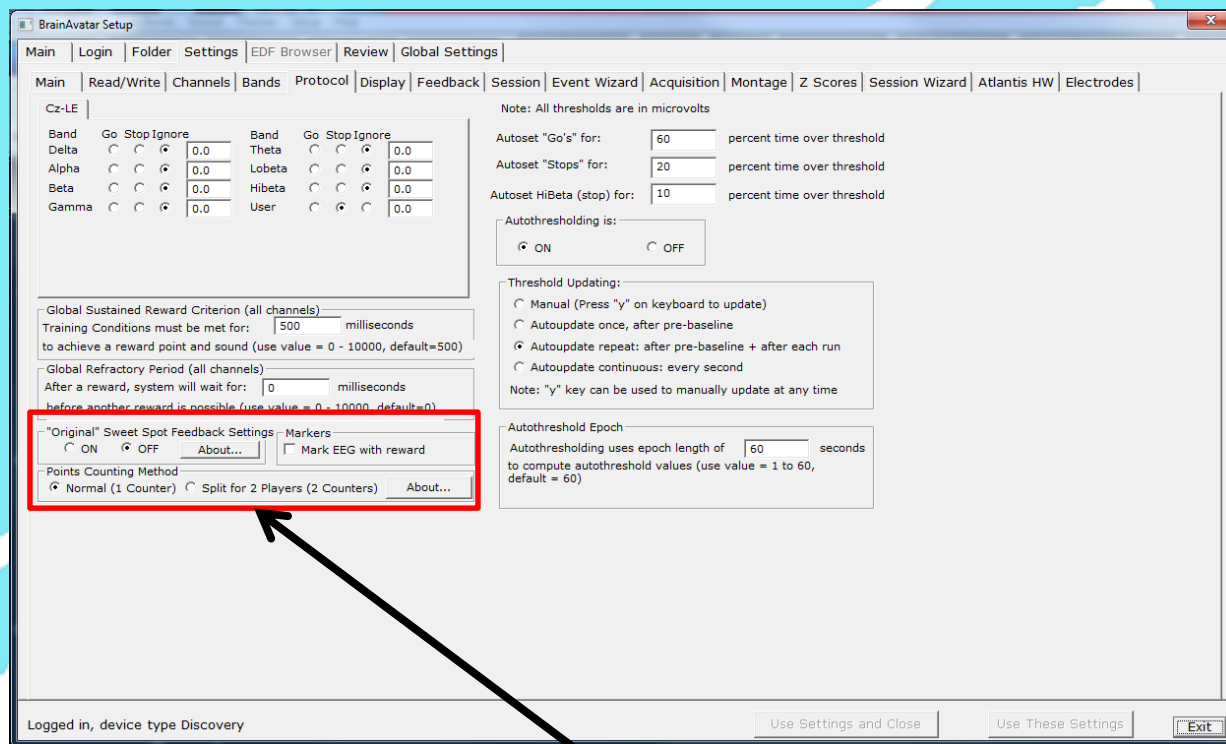


Global Refractory Period is set for 0 milliseconds. This depicts the amount of time before another reward tone, point, game or video advance is possible. In other words if this value were to be set a 500 milliseconds, a tone would sound if the reward criterion were met, however, another tone would not be produced until 1/2 a second elapses.

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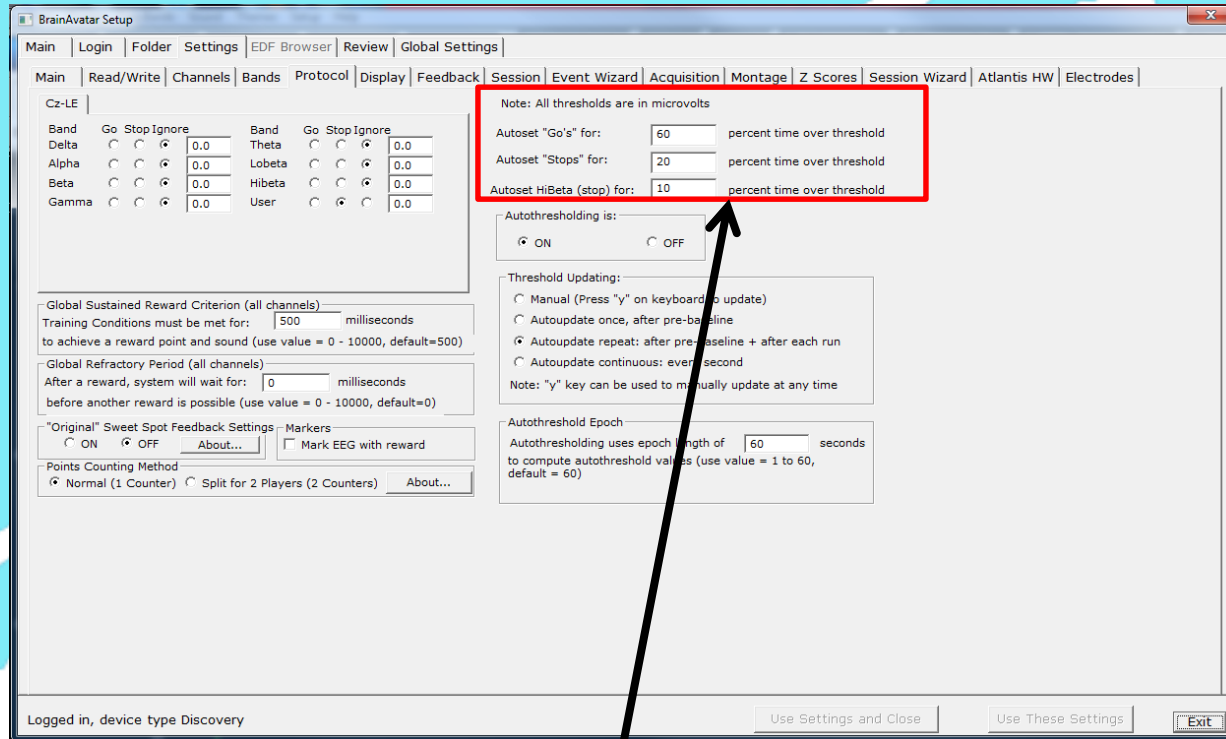


The “Original” Sweet Spot Feedback Setting is provided for those familiar with the archaic DOS based Neurocybernetics system and is seldom used. The Points Counting Method is default to “Normal” and again is seldom used except when there are two players.

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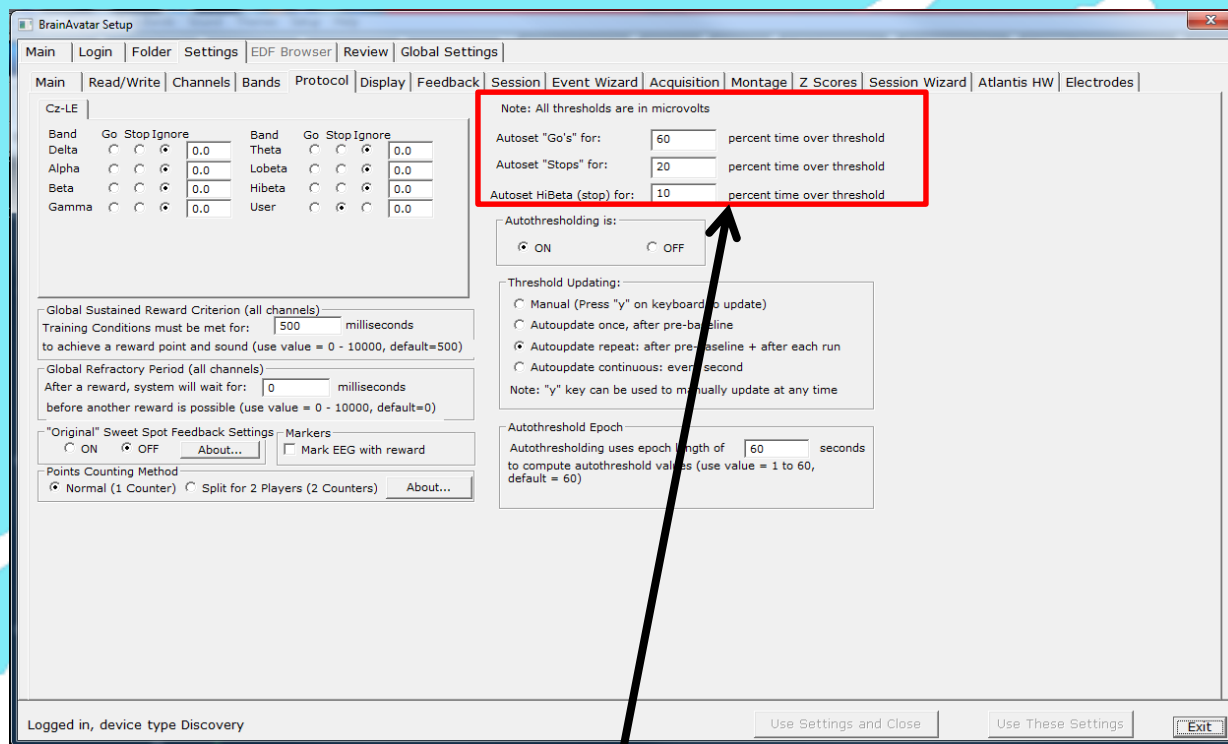


These are the % time over threshold automatic settings for the automatic thresholding control. Notice the reward defaults to 60%. The suggested reward % time over threshold for most protocols is 40%-60%. Inhibits are set for 20% time over threshold. Hibeta inhibits are set for 10% time over threshold.

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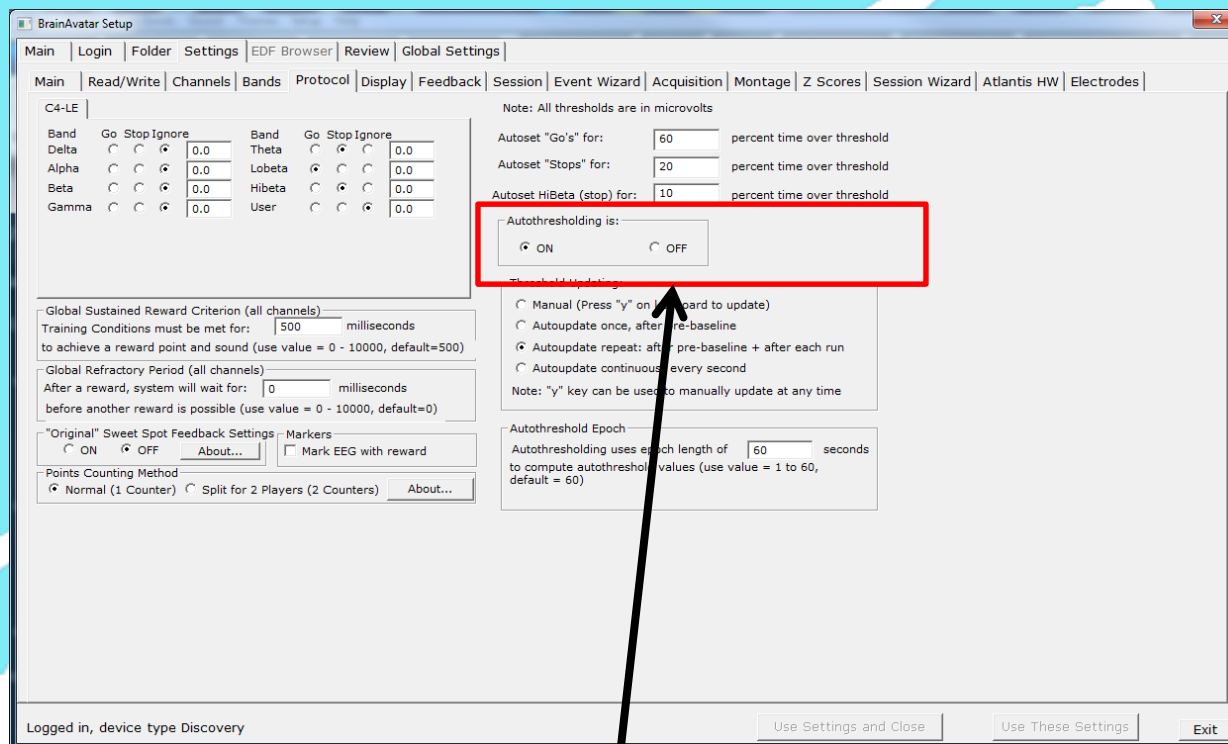


Notice that the inhibits are stated in % time over threshold even though inhibits are produced when theta or hibeta move below the threshold. Do not get confused by this point. In order to learn the proper use of threshold settings it is suggested you take one of the many BCIA Didactic courses offered by Stress Therapy Solution.

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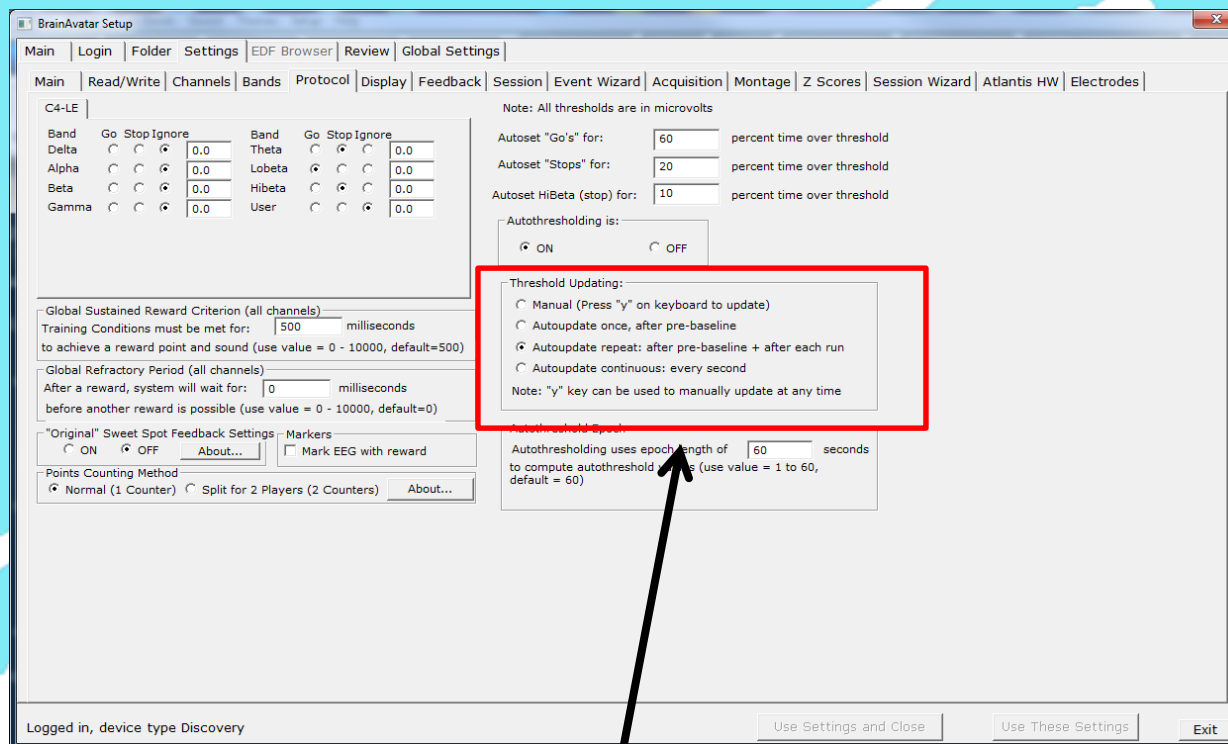


To change from Autothresholding to Manual thresholding select Autothresholding OFF. The use of manual thresholding will be covered later in this program.

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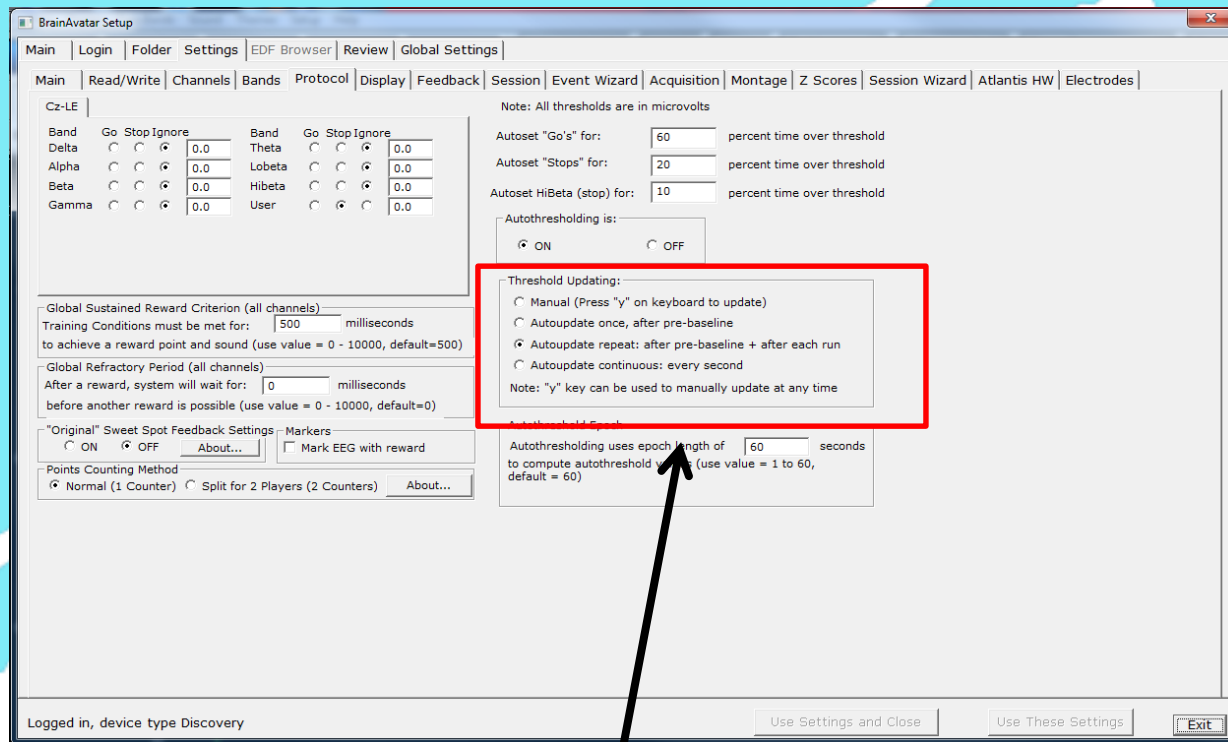


These four settings control Autothreshold Updating. The first choice is a Manual control. Whenever the "y" key on the keyboard is tapped the threshold on all thermometers will automatically be adjusted to the current amplitude of the frequency bands used.

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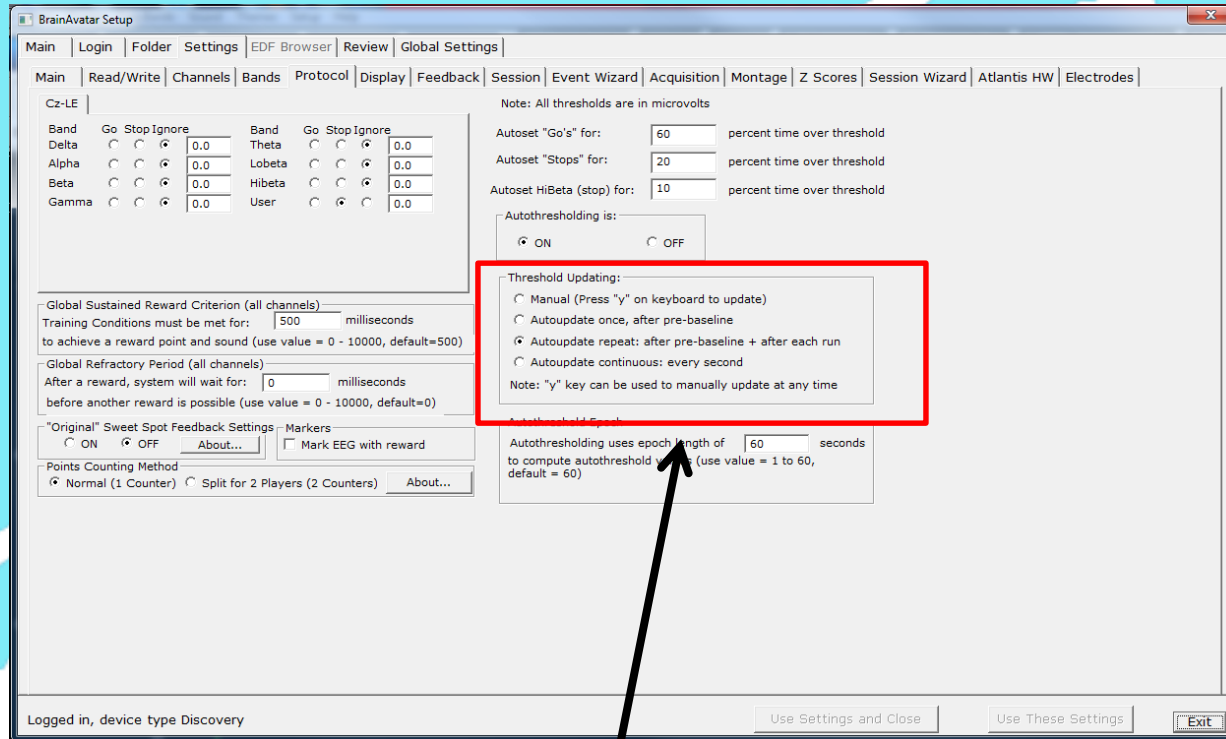


The second choice is for the system to Autoupdate only once after the pre-baseline period is complete. Baseline, Run Length and Number of Runs are controlled in the Session Tab and will be covered in another Level 2 Presentation.

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The Protocol is now ready for Modification



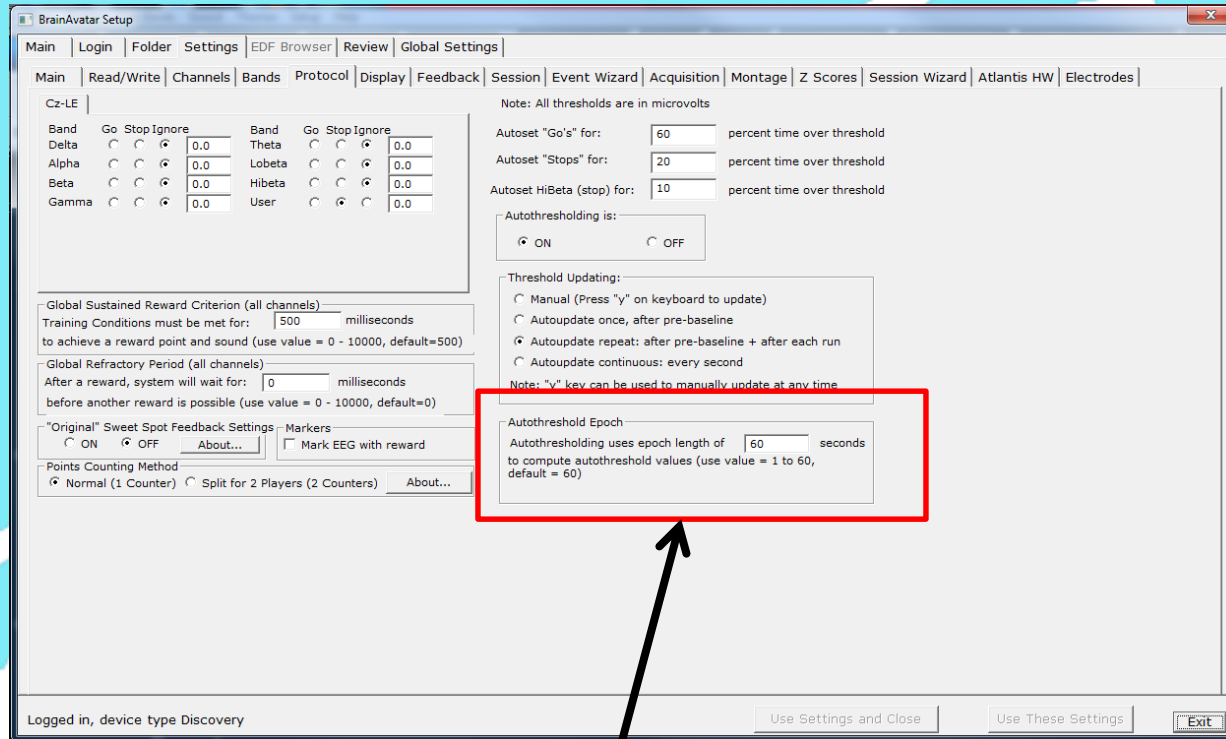
The third choice, Autoupdate repeat: after pre-baseline + after each run is the default selection and continuously updates the thresholds throughout the session.

The fourth choice, Autoupdate continuous: every second acts like a dynamic threshold continuously updating throughout the session.

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The Protocol is now ready for Modification

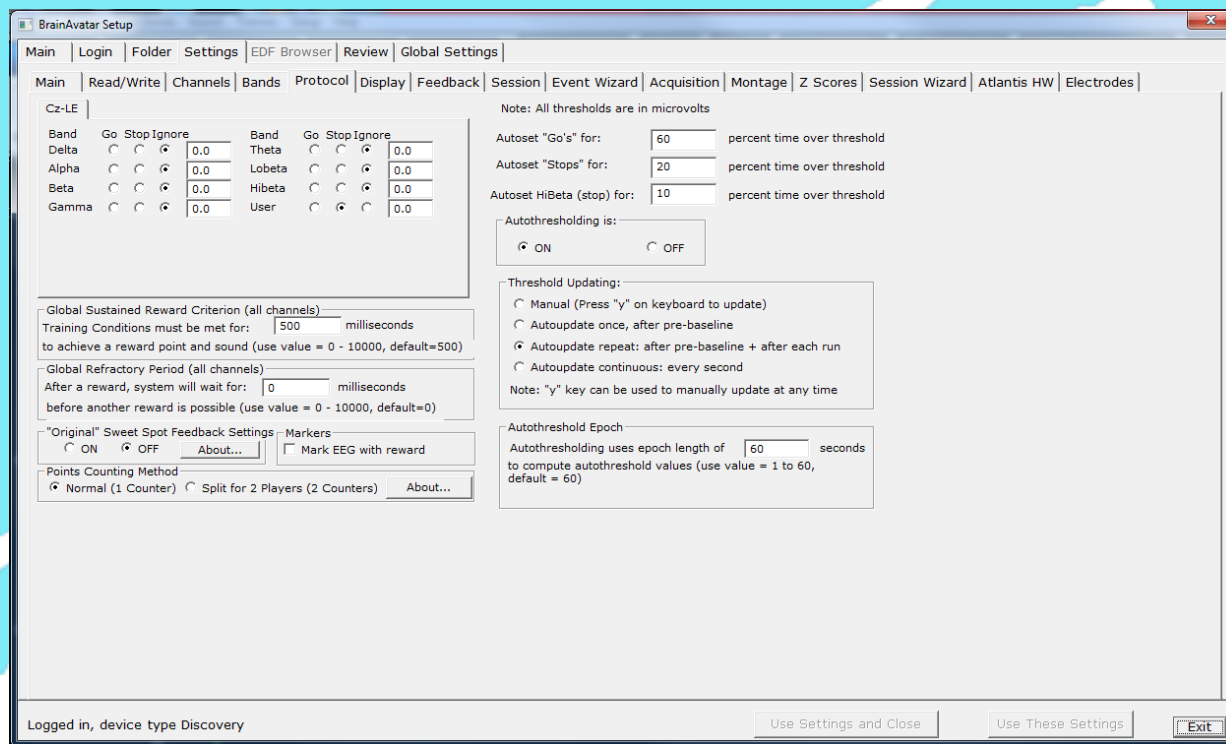


An epoch is a time period. In this case the epoch is defined as 60 seconds. The Autothreshold epoch when set to 60 seconds states that every 60 seconds the program takes a reading of the current amplitude and averages it with the other epochs to yield the Autothreshold value. If you reduce the epoch length the Autothreshold will calculate more quickly and thus update more rapidly.

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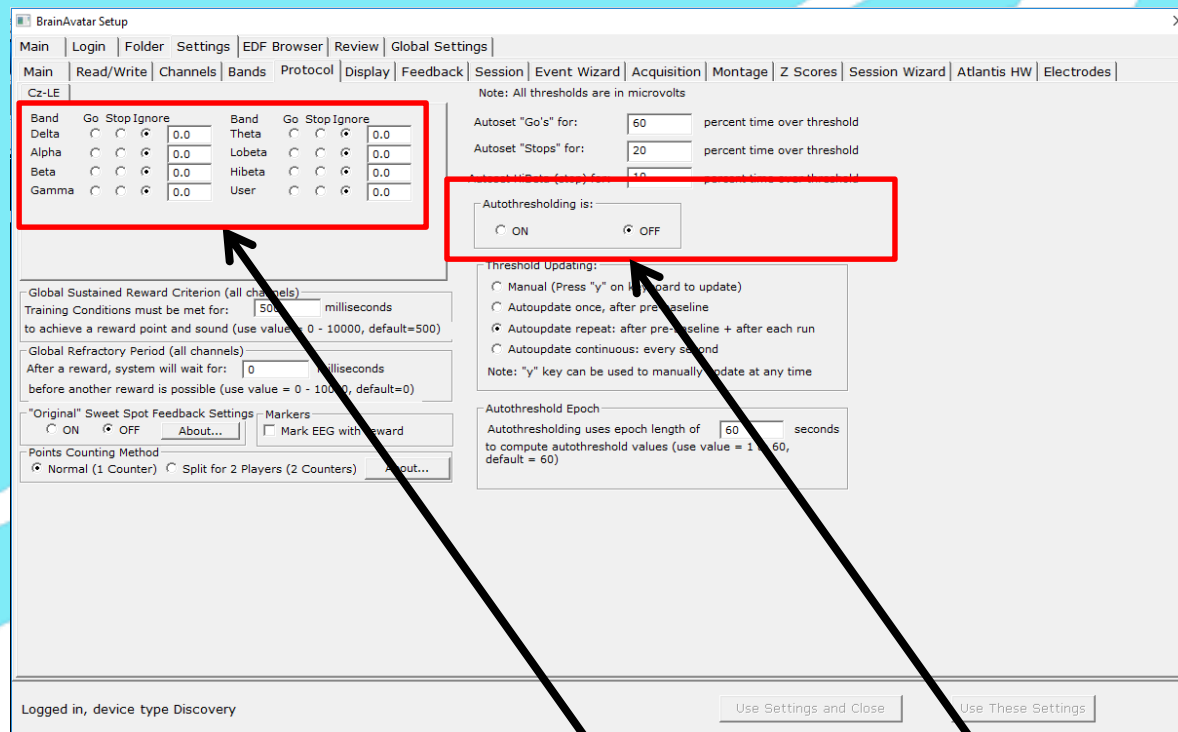


A wonderful thing about these protocol settings is that they may be adjusted on the fly while the client is being trained giving you a greater range of control over the session.

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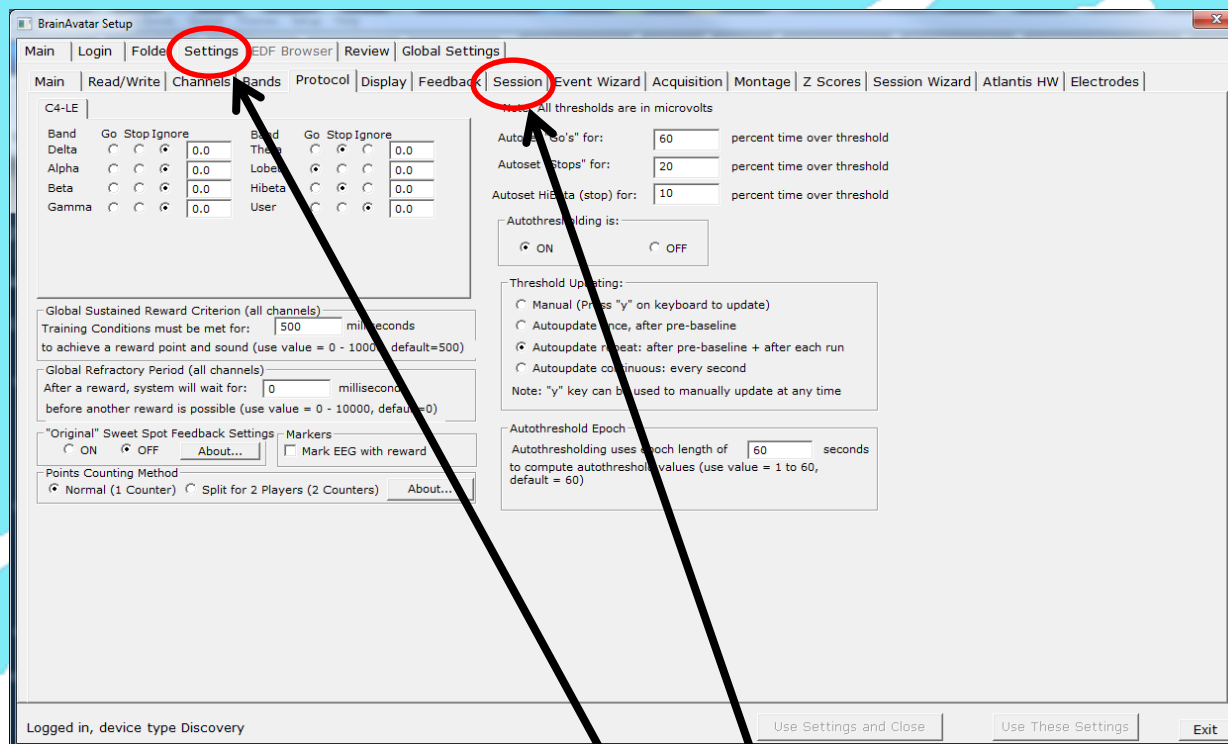


Now, let's learn how to change from Automatic to Manual Thresholding. First, make sure all digital filter settings are set to ignore. Next, click "off" in the autothresholding box.

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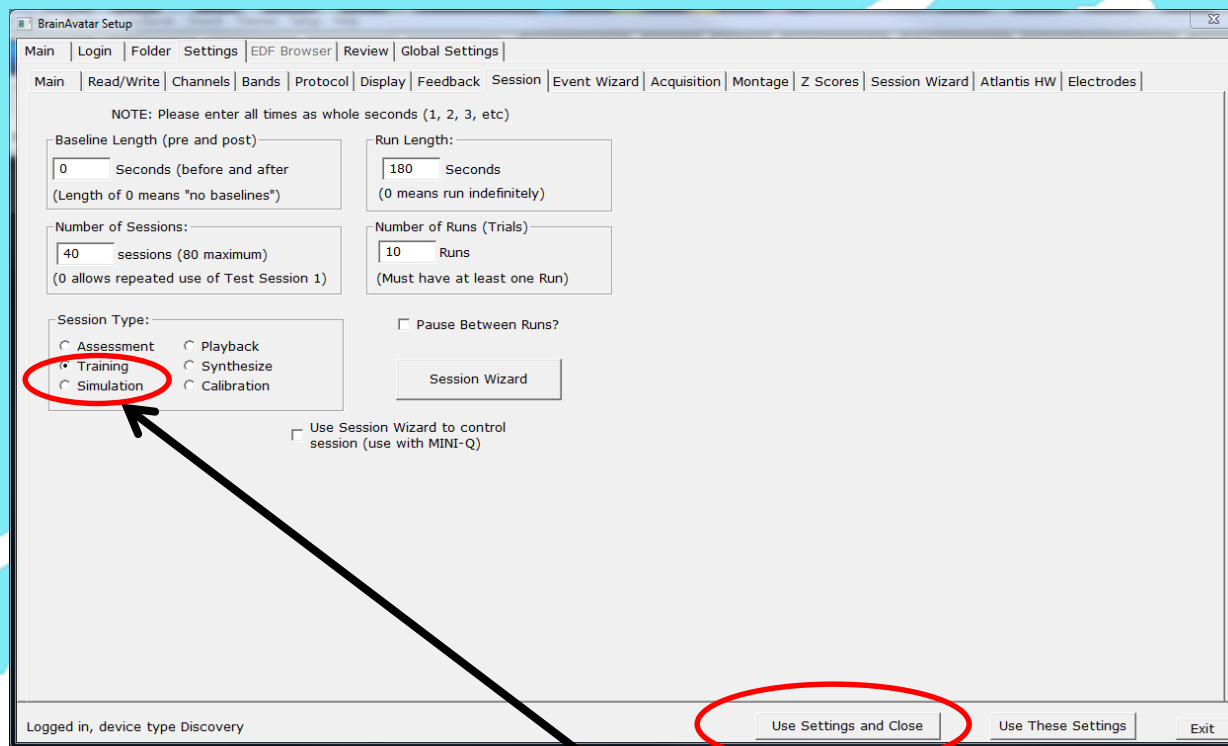


In order to test the manual thresholding lets run a simulation. Select the “Settings” Tab at the top. Next select the Session Tab.

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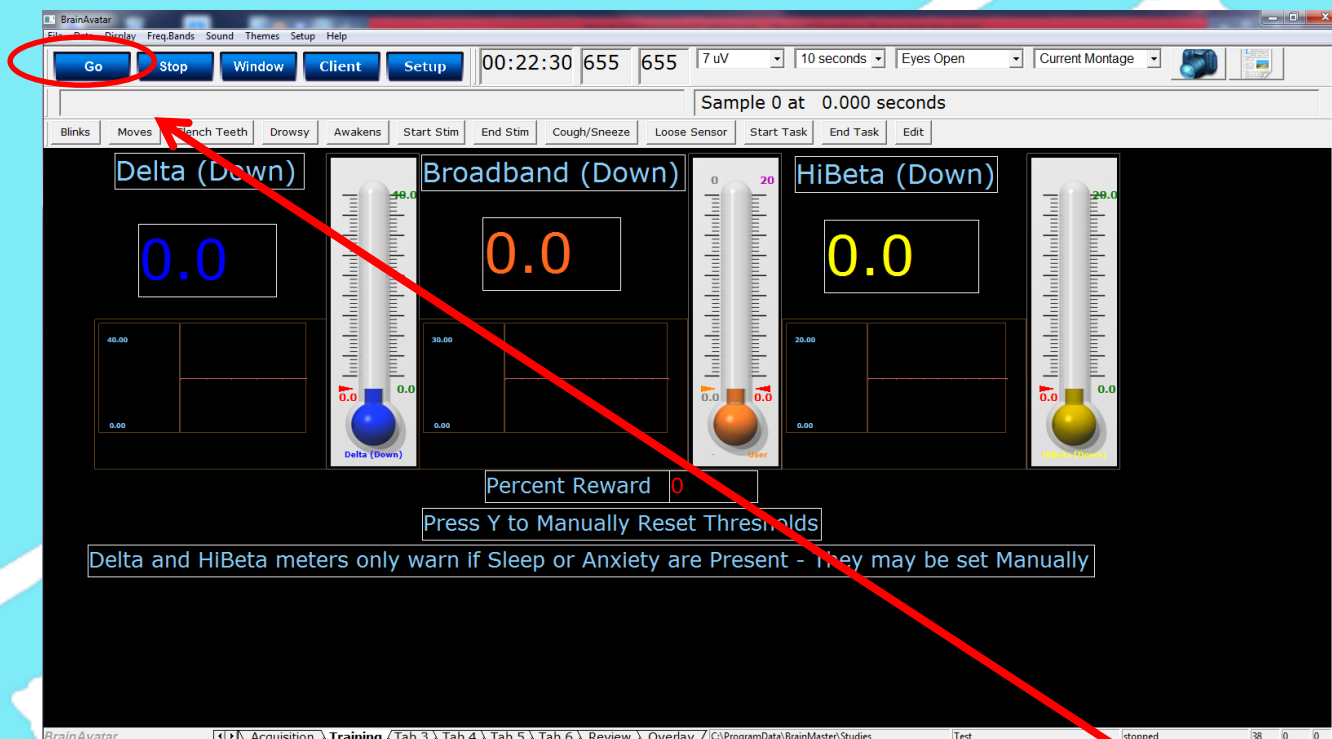


Click the Simulation radial button in the Session Type Window. Once selected click "Use Settings and Close".

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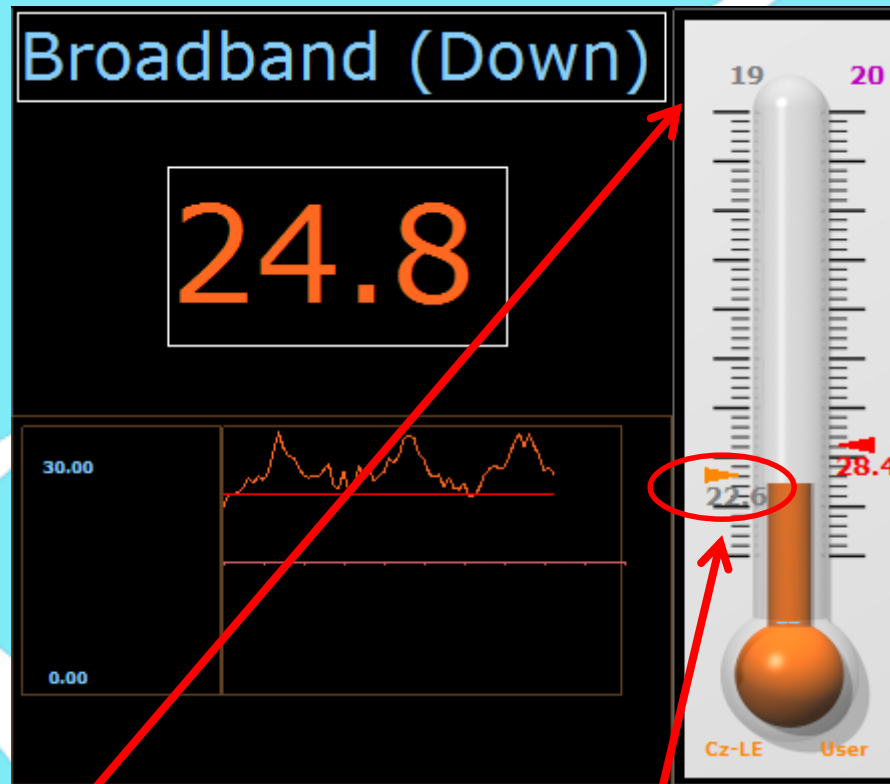


Make sure you are in the Training Tab of the protocol and click “Go”

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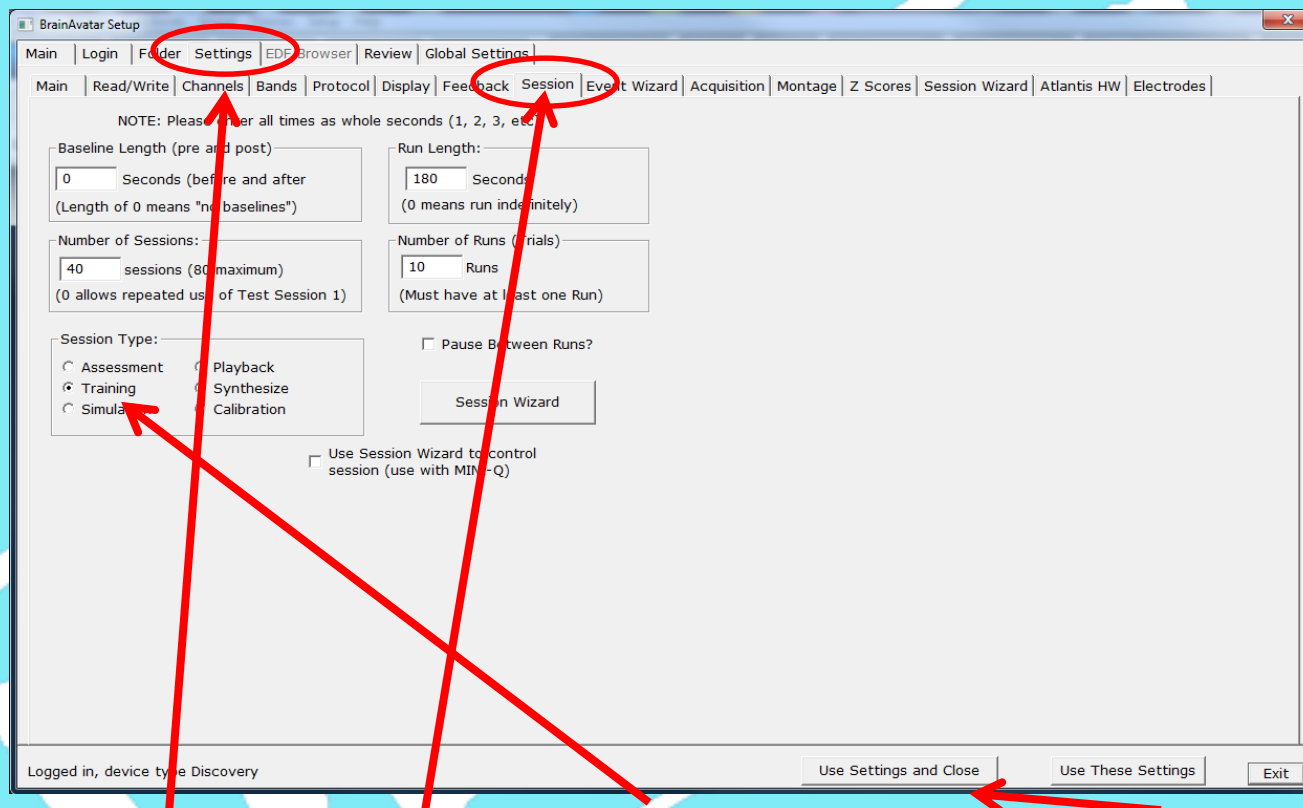


Now click the “u” key (user threshold) until the user threshold reaches the desired level (≈20% above threshold). You can adjust the user threshold downward by clicking “shift-u”.

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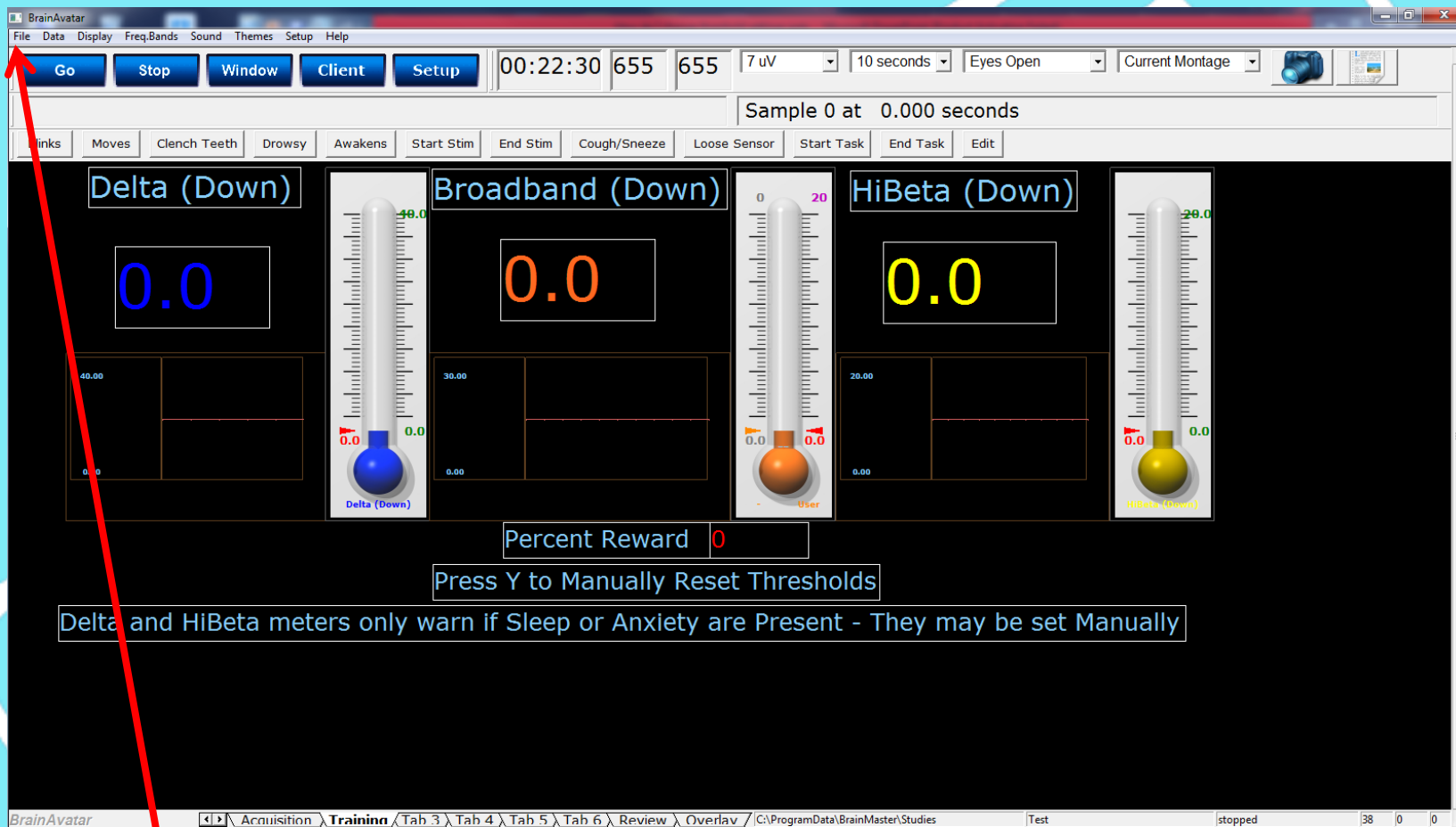


Let us now reset the setting back into training mode prior to saving it so that it is ready to be used with the client. Click Settings, then Session, then Training, and finally Use Settings and Close to exit the settings screen.

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Next we must save our changes



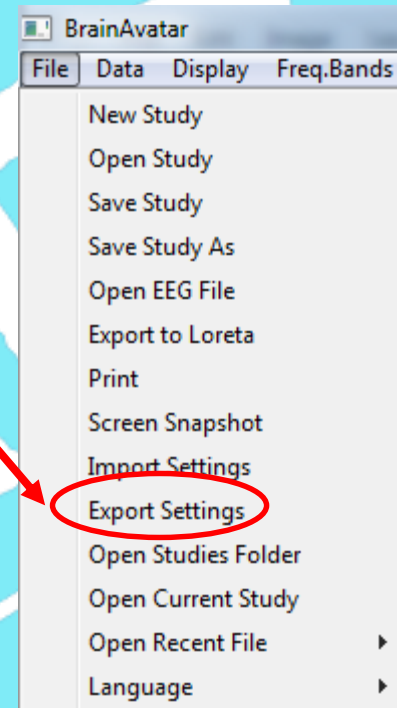
Click "File".

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Level 2

Next click “Export Settings”.

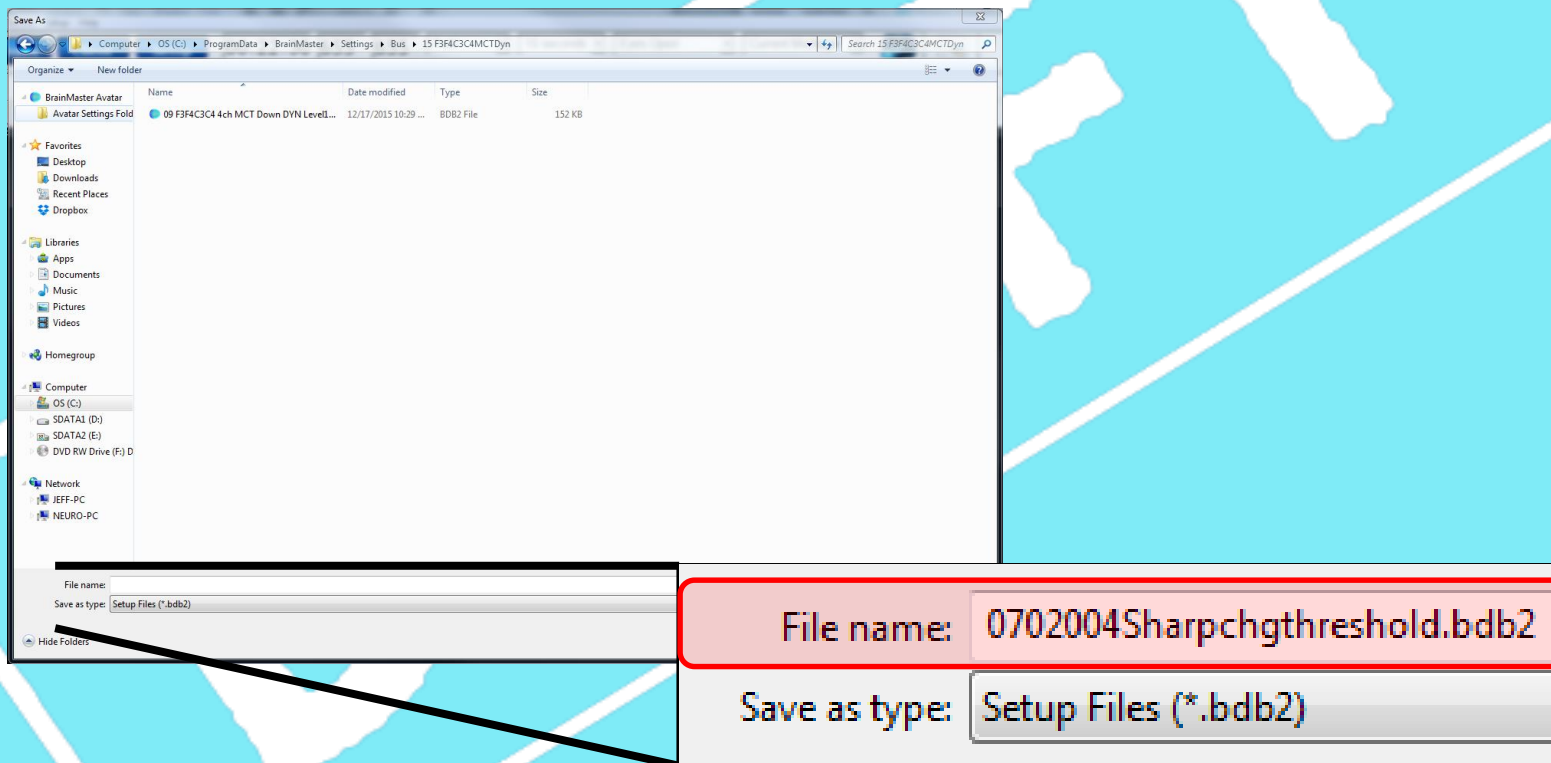


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Find the folder where you keep these settings and name the file properly in the “File Name:” window.

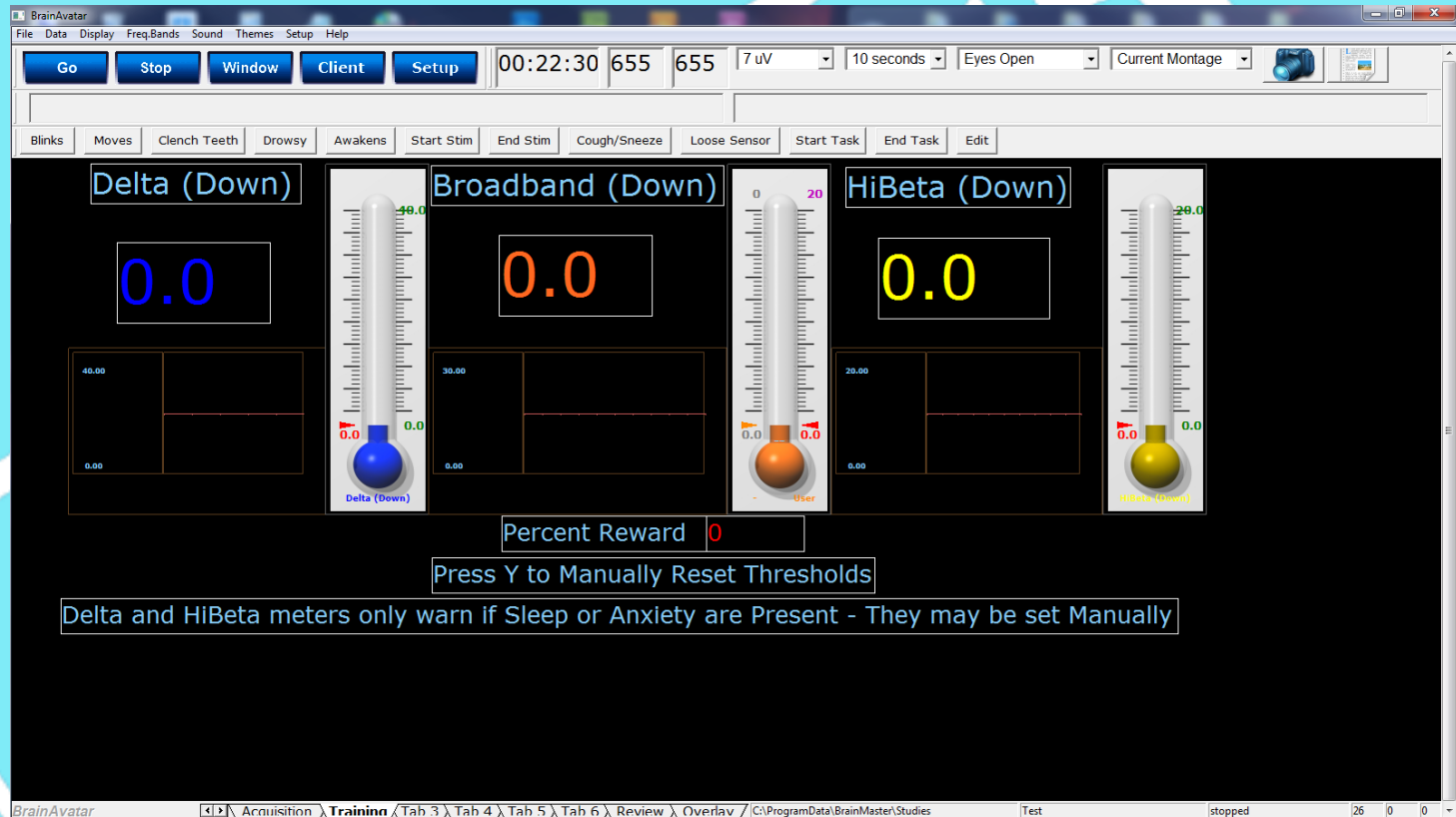


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The Protocol is now ready to run with the revisions made.



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