

# BrainMaster TECHNOLOGIES

The next generation of 3D Brain Imaging and Neurotherapy

## Quick Start Guide



## BrainMaster Passkey Log

BrainMaster Serial Number\_\_\_\_\_

Passkey\_\_\_\_\_

Date Purchased\_\_\_\_\_

Date Affiliate Expires\_\_\_\_\_

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# Minimum PC Requirements

## BrainMaster 3.0 Software or Discovery 1.0 Software with up to 4-Channel LZT\*

CPU: Dual-Core 2.2GHz Processor  
Operating System: Windows XP, Windows Vista, Windows 7, Windows 8/8.1, Windows 10  
Memory (RAM): Windows XP - 1GB (Minimum) 2GB (Recommended)  
Windows Vista - 2GB (Minimum) 4GB (Recommended)  
Windows 7 - 2GB (Minimum) 4GB (Recommended)  
Windows 8 - 2GB (Minimum) 4GB (Recommended)  
Graphics Card: 512MB Dedicated OR 1GB Shared Graphics  
Optical Drives: DVD-ROM Drive: Required for BMrDVD  
Input: 1 USB Port  
Additional SW: Microsoft Office: Required for Certain reports and EEGAudio  
Windows Media Player or 3rd Party DVD Decoder: Required for BMrDVD  
Adobe Acrobat Reader  
Adobe Flash Player: Required for BMrFlash Player  
Adobe Shockwave Player: Required for BMrFlash Player

## Discovery 1.0 Software with BMrMMP\*\* and up to 19-Channel LZT\*

CPU: Quad-core or above (Intel i7 or equivalent preferred)  
Operating System: Windows Vista, Windows 7, Windows 8/8.1, Windows 10  
Memory (RAM): 4GB  
Graphics Card: Direct x 10 or above compatible graphics card 1GB Dedicated  
Optical Drives: DVD-ROM Drive: Required for BMrDVD\*\*  
Input: 1 USB Port  
Additional SW: Microsoft Office: Required for certain reports and EEGAudio\*\*  
Windows Media Player or 3rd Party DVD Decoder: Required for BMrDVD\*\*  
Adobe Acrobat Reader  
Adobe Flash Player: Required for BMrFlash Player  
Adobe Shockwave Player: Required for BMrFlash Player

## BrainAvatar™ 4.0 Software

CPU: Quad-core or above (Intel i7 or equivalent preferred)  
Operating System: Windows 8/8.1, Windows 10  
Memory (RAM): 4GB  
Graphics Card: Direct x 10 or above compatible graphics card 1GB Dedicated  
Optical Drives: DVD-ROM Drive: Required for BMrDVD\*\*  
Input: 1 USB Port  
Additional SW: Microsoft Office: Required for certain reports and EEGAudio\*\*  
Windows Media Player or 3rd Party DVD Decoder: Required for BMrDVD\*\*  
Adobe Acrobat Reader



\*Live Z-Score Training is an optional purchase

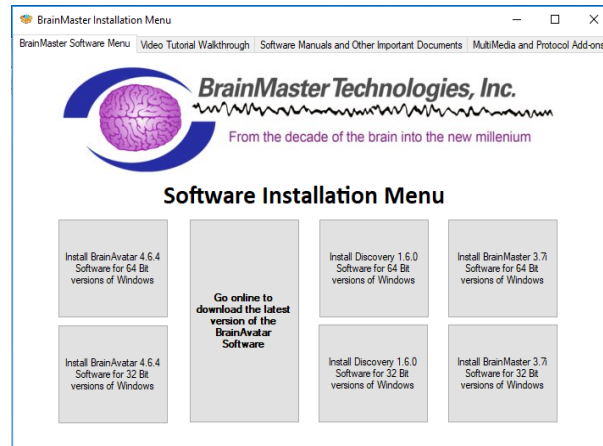
\*\*BMrMMP is an optional purchase

# Installation

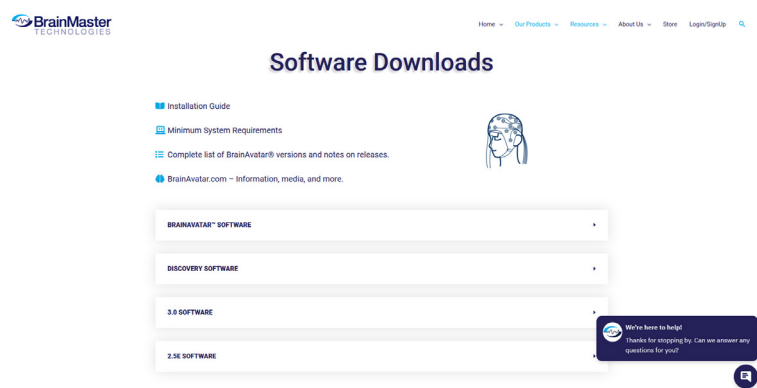
## Where to find it

BrainMaster software can be found in two different locations:

1. The BrainMaster Installation Disc\* included with your BrainMaster Hardware



2. Online at [www.brainm.com/](http://www.brainm.com/)



There are two different versions of the software:

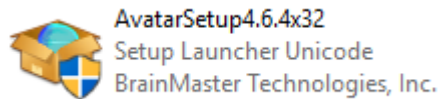
- One version that can be installed on 32-Bit versions of the Windows operating system.
- One version that can be installed on 64-Bit versions of the Windows operating system.

*\*This disc is supplied when initially purchased, and is also available for purchase.*

# Installation

## ***Which version of software should be installed***

**NameOfSoftwarex32:** This software is intended to only be installed on versions of Windows that are 32-Bit

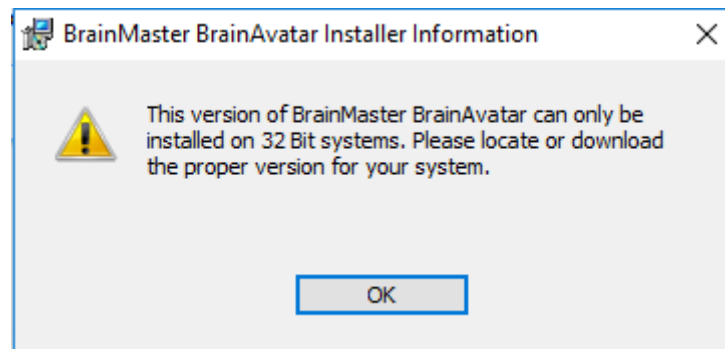


***How to tell your version of Windows is 32-Bit:*** If your version of Windows is 32-Bit, then on the C Drive, you will have a single directory labeled Program Files

PC > Local Disk (C:)

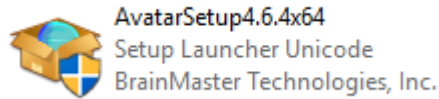
Name	Date modified	Type
AMD	5/22/2017 3:40 PM	File folder
BHC652PCL6Winx64_3700EN	5/8/2017 4:07 PM	File folder
brainm.20	5/11/2017 9:10 AM	File folder
inetpub	5/22/2017 5:15 PM	File folder
MSOCache	5/15/2017 4:15 PM	File folder
New folder	5/19/2017 4:08 PM	File folder
NFplayer	5/9/2017 4:05 PM	File folder
NFviewer	5/9/2017 4:05 PM	File folder
PerfLogs	3/18/2017 5:03 PM	File folder
Program Files	5/22/2017 5:15 PM	File folder

***If an attempt is made to install NameOfSoftwarex32 on a 64-Bit version of windows:*** You will see the following error message.

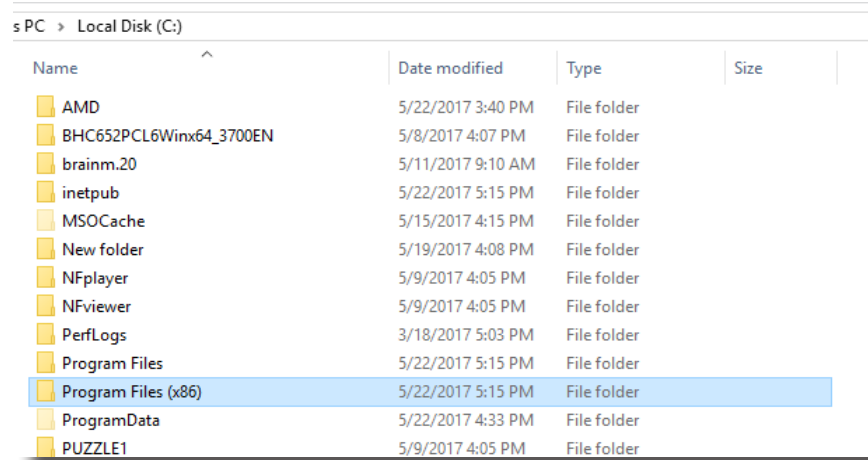


# Installation

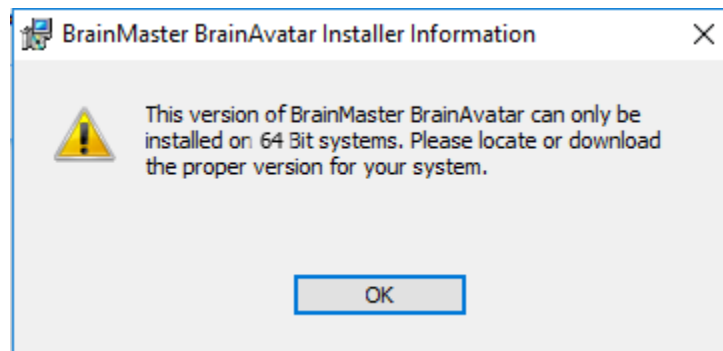
**NameOfSoftwarex64:** This software is intended to only be installed on versions of Windows that are 64-Bit



**How to tell your version of Windows is 64-Bit:** If your version of Windows is 64-Bit, then on the C Drive, you will have two directories. One labeled Program Files and one labeled Program Files (x86).



**If an attempt is made to install NameOfSoftwarex64 on a 32-Bit version of windows:** You will see the following error message.



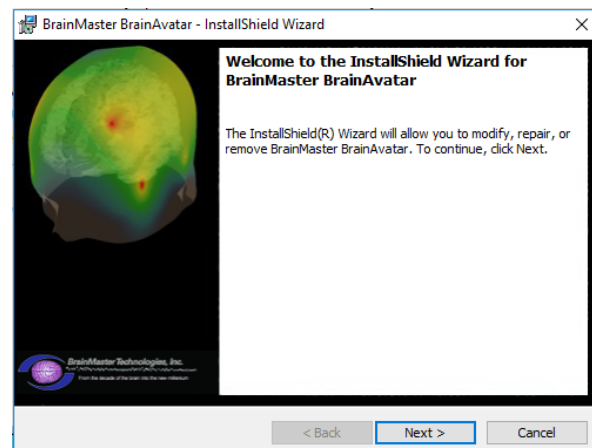
# Installation

## *Installation Process*

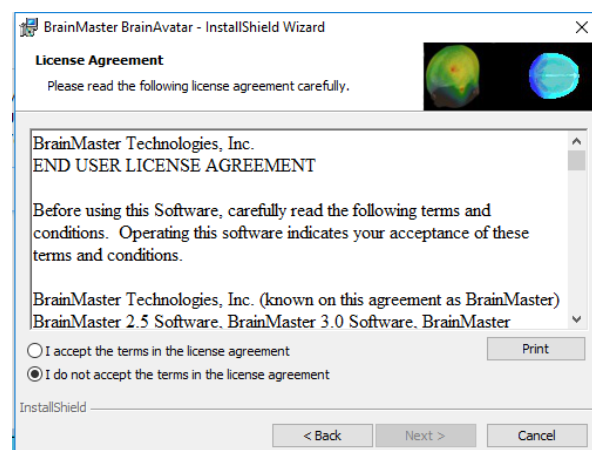
1. After beginning the software installation, an extraction screen will appear. No action is needed, but this process will take a few minutes, depending on your computer.



2. When this is completed, the InstallShield Wizard screen will appear. Click “Next” to continue.



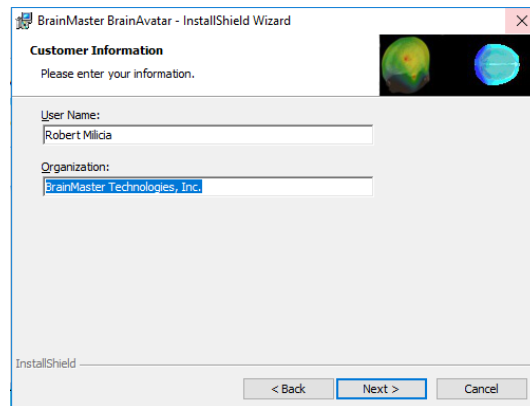
3. In order to continue through the installation process, the license agreement will need to be accepted. Do this by clicking “I accept the terms in the license agreement,” then click “Next” to continue.



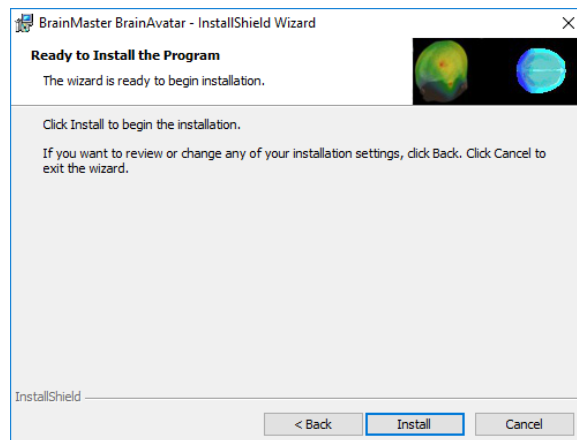


# Installation

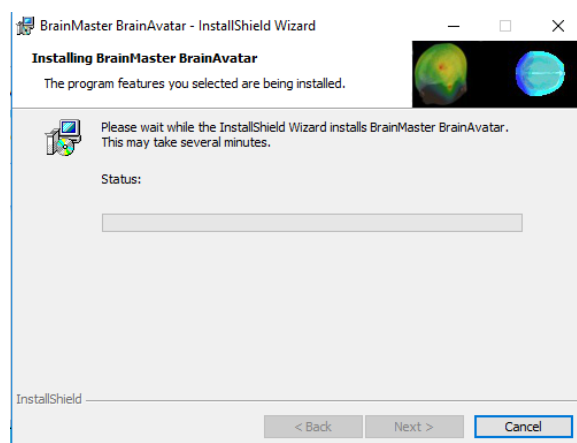
- Please enter your User Name and Organization (Optional), and click “Next” to continue.



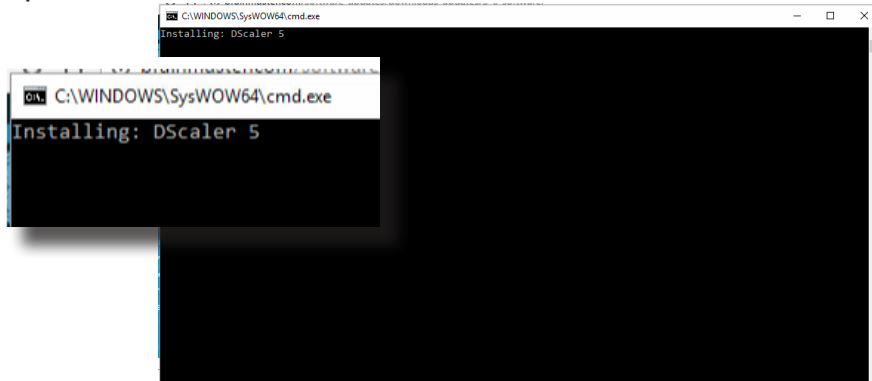
- When the following screen appears, click Install to continue.



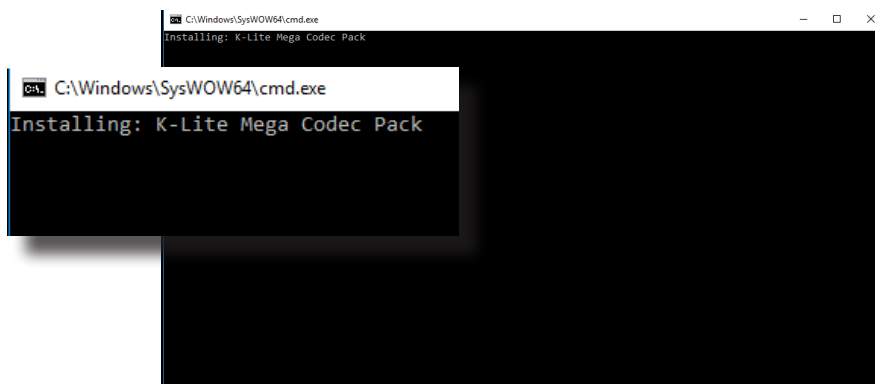
- The BrainMaster Installation will begin. **Before this completes, additional installers will begin to install.**



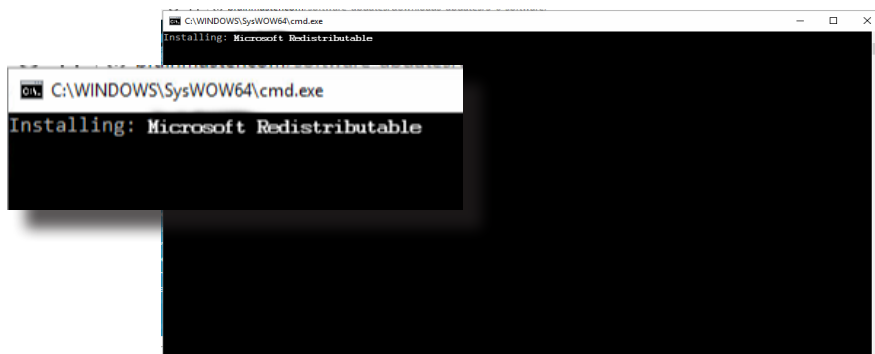
7. A command prompt screen stating that it is installing DScaler 5 will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer.



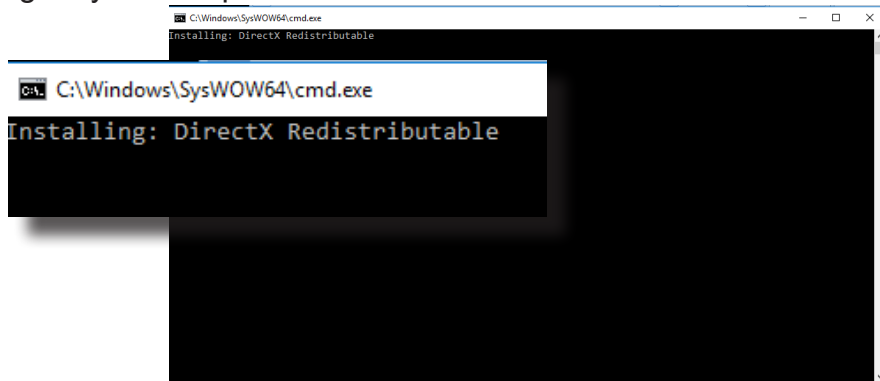
8. A command prompt screen stating that it is installing the K-Lite Mega Codec pack will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer.



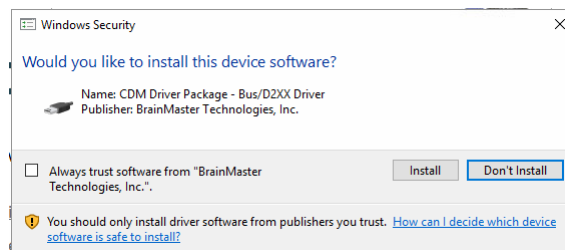
9. **PLEASE NOTE:** If you are installing any software besides the BrainAvatar Software, please proceed to step 11. A command prompt screen stating that it is installing a Microsoft Redistributable will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer.



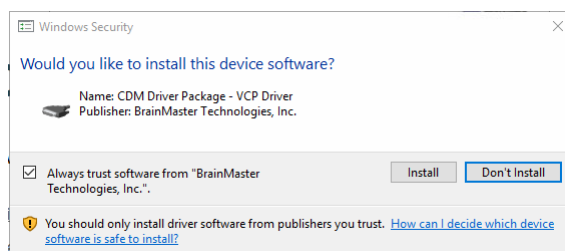
10. A command prompt screen stating that it is installing a DirectX Redistributable will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer.



11. **If you have not installed any prior BrainMaster Software. Or, you have not checked the “Always Trust software from BrainMaster Technologies, Inc.” check box in your previous installation,** the following Windows Security Window will appear asking if you would like to install the USB Drivers for the BrainMaster Hardware. To avoid seeing an additional screen, click the always trust software from “BrainMaster Technologies, Inc.”. Then, click the Install Button.

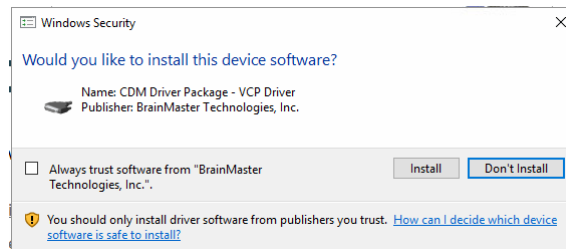


12. **If you did not click on the box above,** another Windows Security Windows Window will appear asking you would like to install the VCP for the BrainMaster Hardware. Click the Install Button to continue.

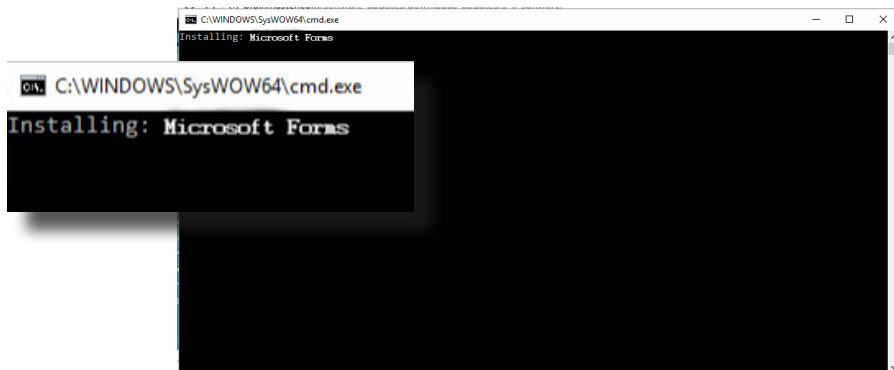


# Installation

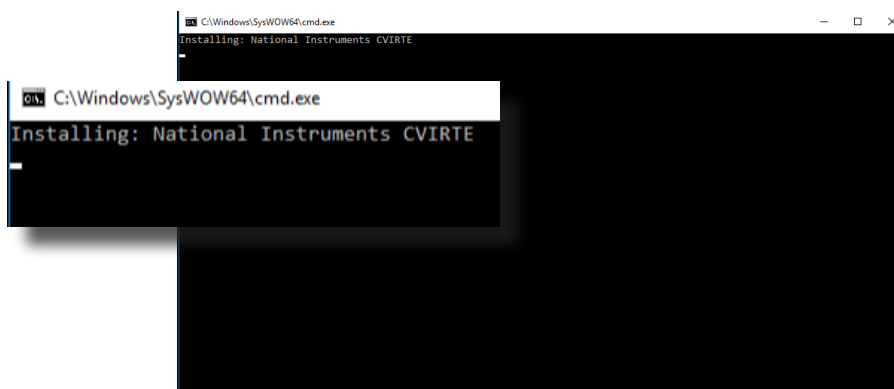
13. If you did not click on the box above, another Windows Security Windows Window will appear asking you would like to install the VCP for the BrainMaster Hardware. Click the Install Button to continue.



14. A command prompt screen stating that it is installing a Microsoft Form Add-on will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer.

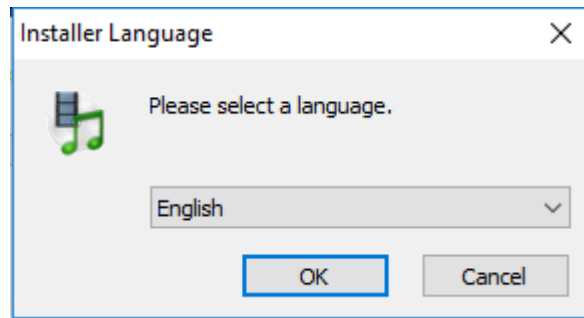


15. A command prompt screen stating that it is installing the National Instruments CVIRTE will appear. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer

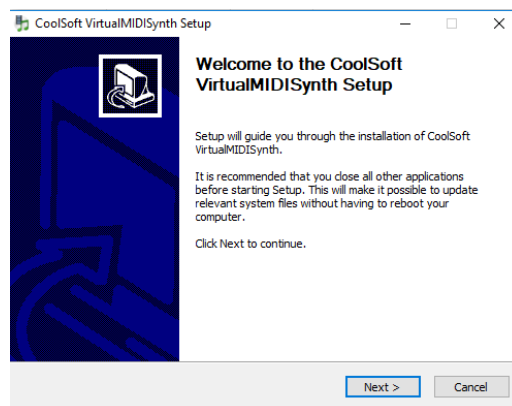


# Installation

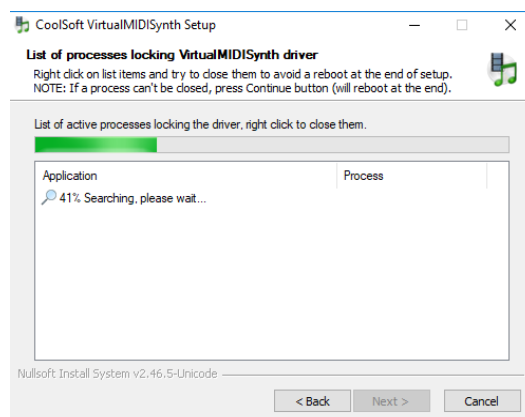
16. The CoolSynth MIDI Synthesizer Application will now begin its installation process. Please select the preferred language for this program and click OK to continue.



17. The Welcome Screen for the CoolSynth software will appear. Click Next to Continue.

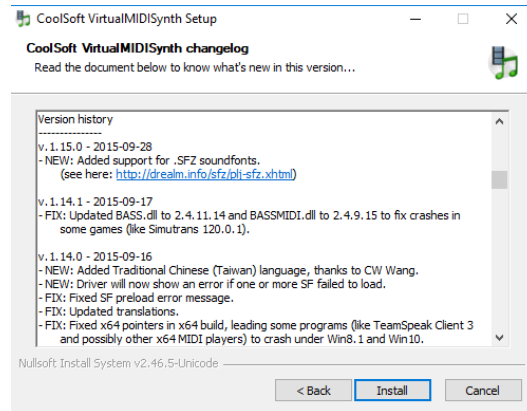


18. CoolSoft Setup will now look for a list of possible applications that might prevent the installation of the VirtualMIDI Synth.

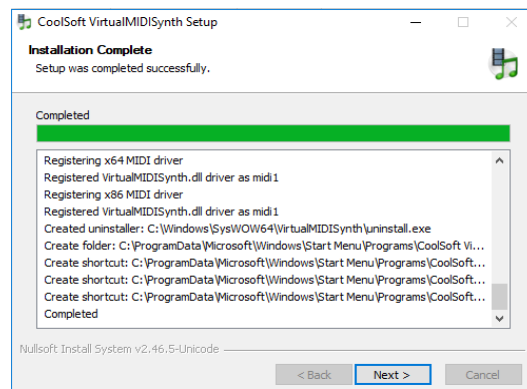


# Installation

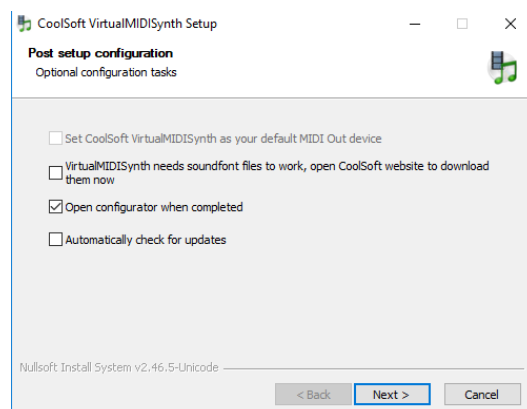
19. The following screen will appear, to let you know the change-log for the MIDI Synth. Click Install to continue.



20. The Installation process will now begin. Once the installation process has completed, click the Next Button to continue.

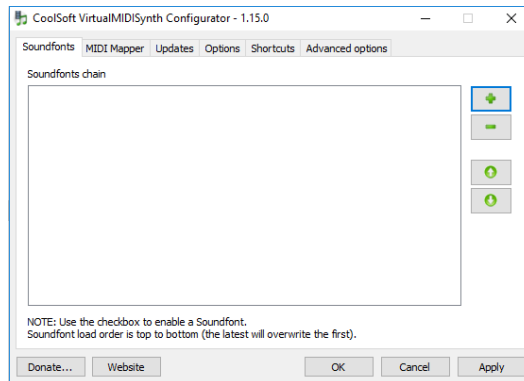


21. The Post setup Configuration Menu will appear. Uncheck “VirtualMIDISynth needs sound font files to work, open CoolSoft website to download them now”, and ‘Automatically check for updates’. When this is completed, click the Next Button to continue.

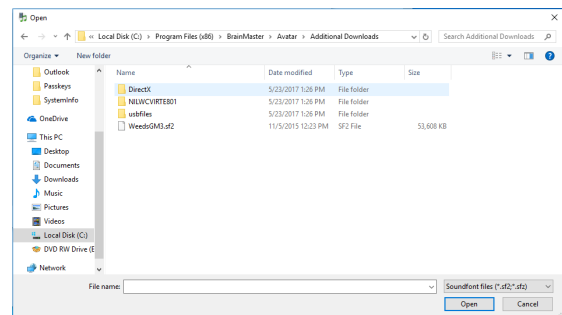
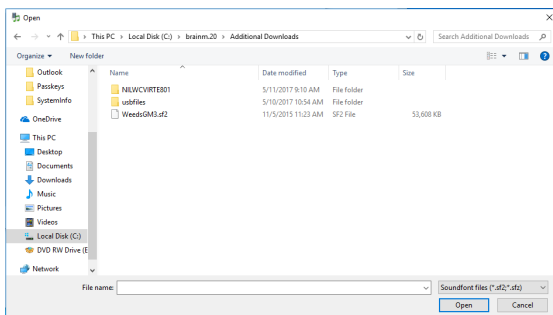


# Installation

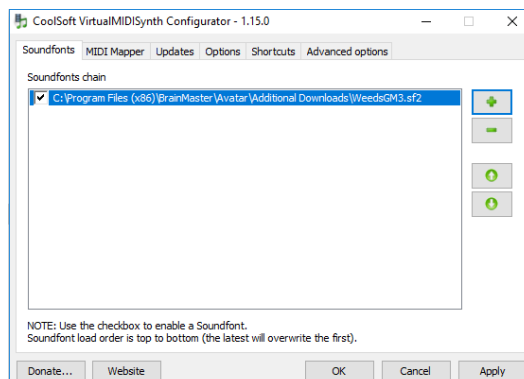
22. The Configurator will open, and you will need to choose the SoundFont file that was installed with your software. Click the “+” Button to find this.



23. You will need to navigate to the SoundFont File location. If you installed the BrainAvatar Software, the SoundFont file can be found at C:\Program Files (x86)\BrainMaster\Avatar\Additional Downloads, and is named WeedsGM3.sf2. If you installed any other Software, the SoundFont file can be found at C:\brainm.20\Additional Downloads, and is still named WeedsGM3.sf2. When you have selected the file click Open to continue.

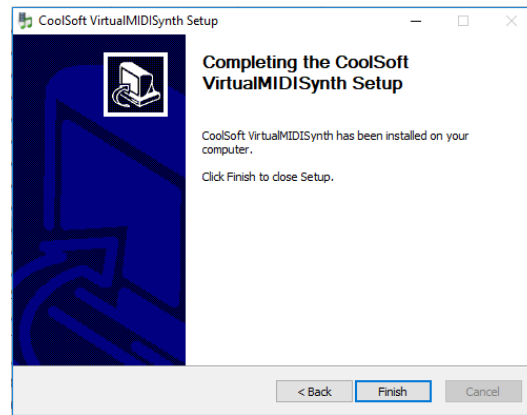


24. After the SoundFont has been selected, it will be available for use in the Configurator. On the Configurator Page, click Apply, then click OK.

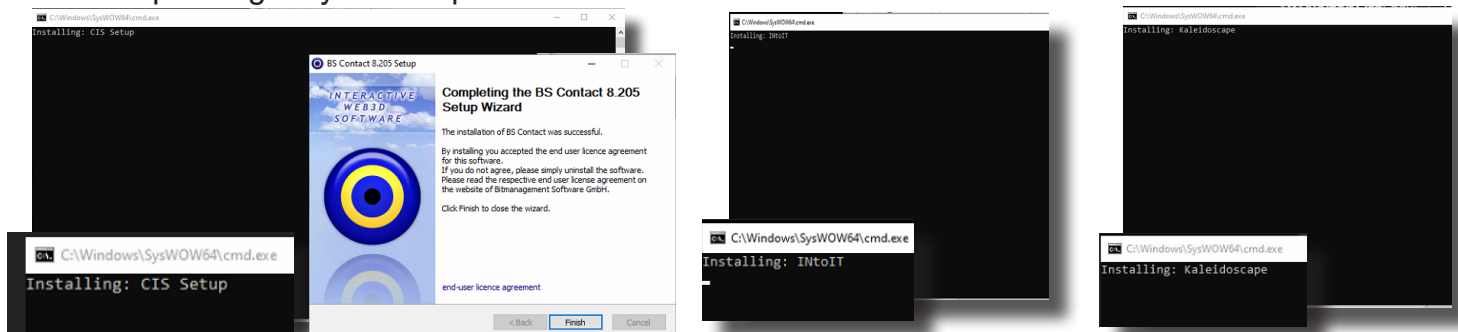


# Installation

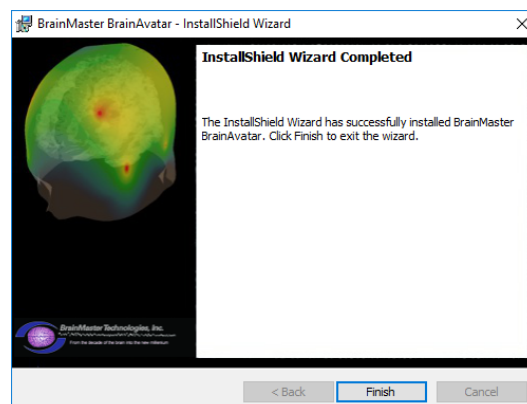
25. The CoolSoft VirtualMIDISynth is now Setup and configured. Click Finish to continue.



26. A command prompt screen stating that it is installing the will appear. Nothing will be required until it is completed, in which you will have to click Finish when prompted. After clicking finish. Two additional command prompt screens will appear to install the additional games. Nothing is needed from you. It will complete on its own, and may take a few minutes depending on your computer



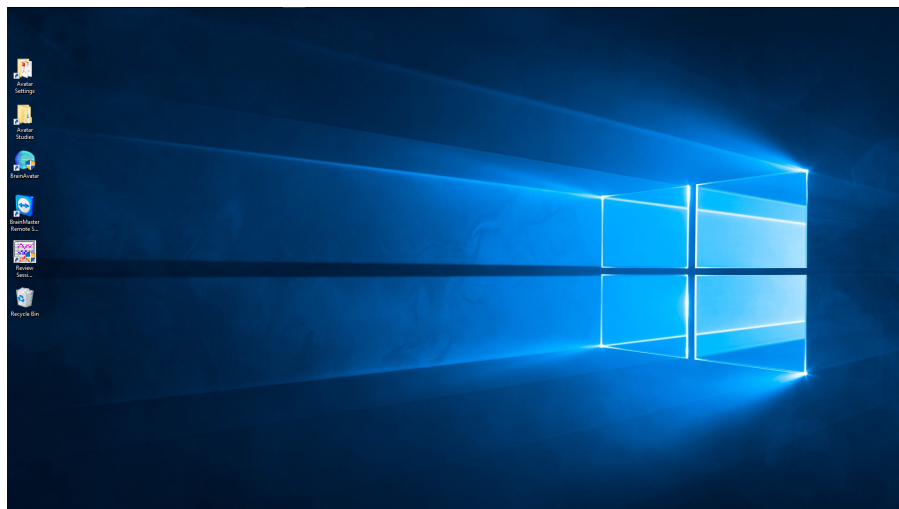
27. The following screen will appear to confirm that the selected BrainMaster Software has been successfully installed. Click Finish to Continue.



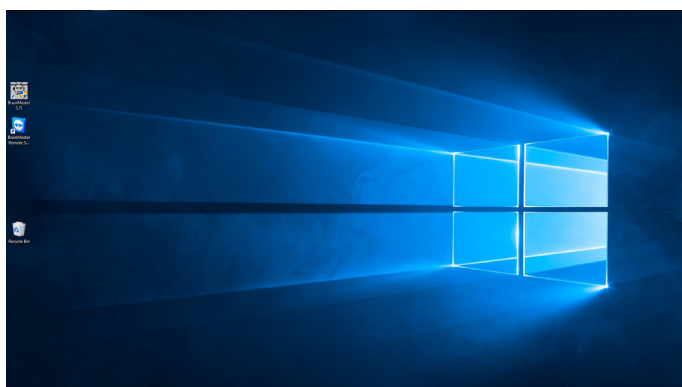


# Installation

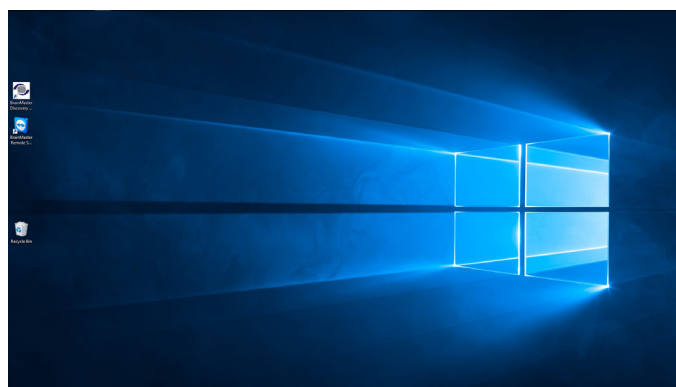
The BrainMaster Software is now installed on your PC. You will be able to see that this is successful by the shortcut newly created on the Desktop. At this time, it is recommended to restart your PC.



*Example of Desktop installed with BrainAvatar Series Software*



*Example of Desktop installed with 2.5 or 3.0 Series Software*



*Example of Desktop installed with Discovery Series Software*

# Quick Setup

## Hardware Setup

1. Plug the supplied USB Cable into the back of the BrainMaster Device.



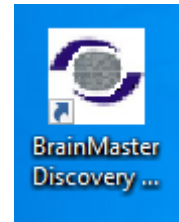
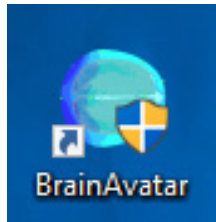
2. Plug the other end of the USB Cable into an open USB Port on the PC. **PLEASE NOTE:** For optimal USB Power Supply, it is recommended to use Back USB Ports of a Computer. If being used with a USB Hub, This Hub, needs to be an AC-Powered USB Hub.



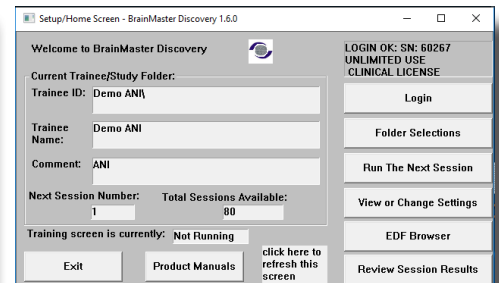
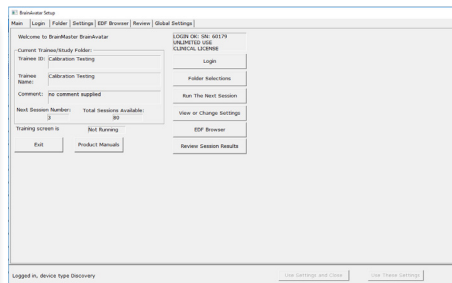
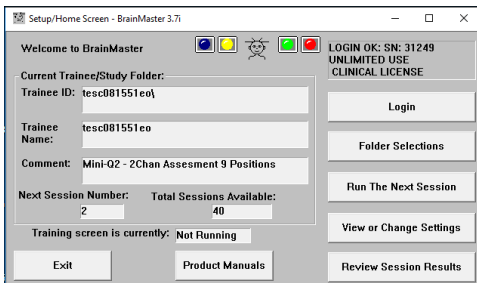
# Quick Setup

## Software Setup - Passkey and COM

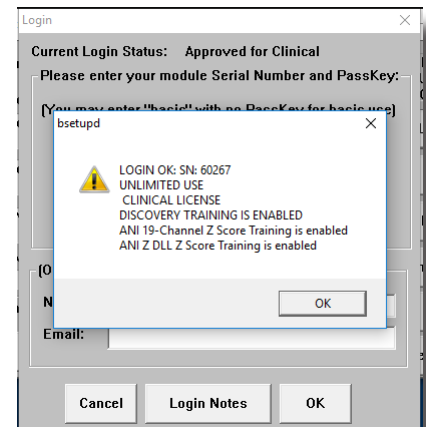
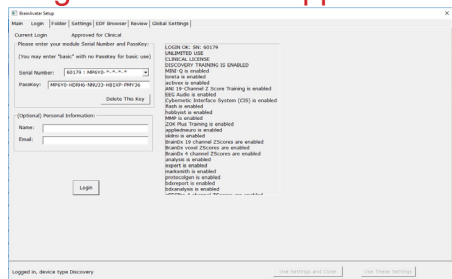
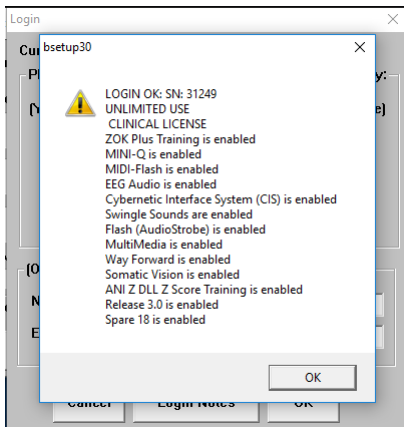
1. Open the Proper Software for your purchase, by double-clicking the icon on your desktop, if not already open.



2. After the software opens, click the Login Button, or Login Tab, in order to login to the software for use.

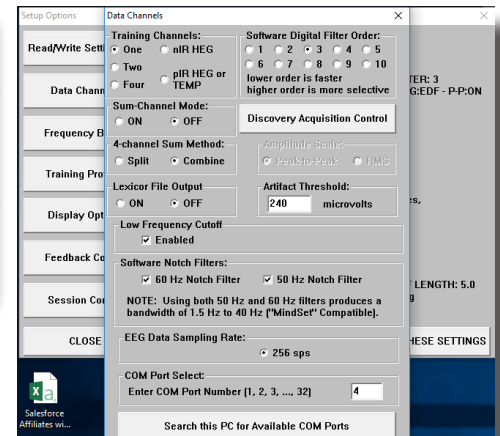
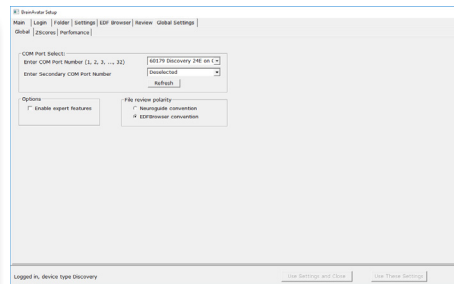
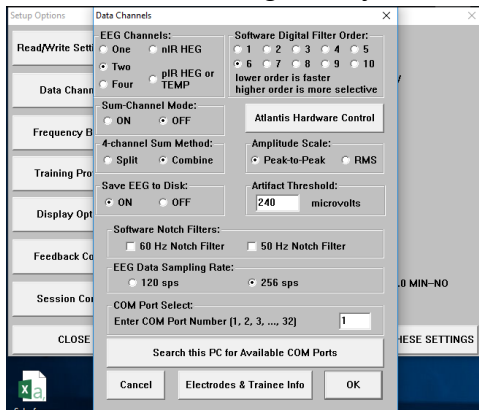


3. Fill out the serial number of your device in the Serial Number field, and enter the passkey that you received from BrainMaster Technologies into the Passkey field. After entered, click to the OK Button to continue **PLEASE NOTE: If you have not received a passkey, please contact BrainMaster Technologies Technical Support.**



# Quick Setup

4. Set the COM Port in the software to match the COM Port that your BrainMaster Device has been assigned by Windows

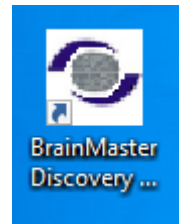
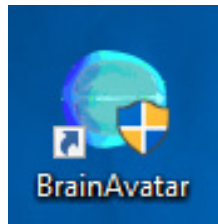


You are now ready to utilize the BrainMaster Software.

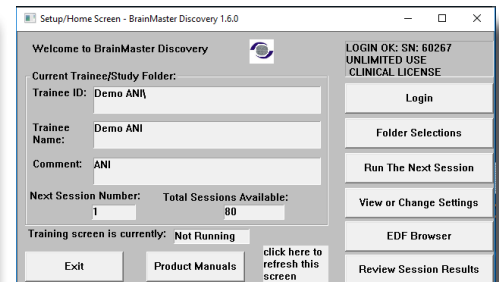
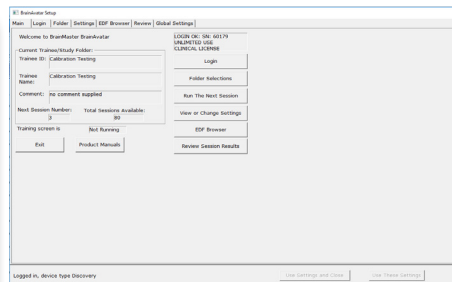
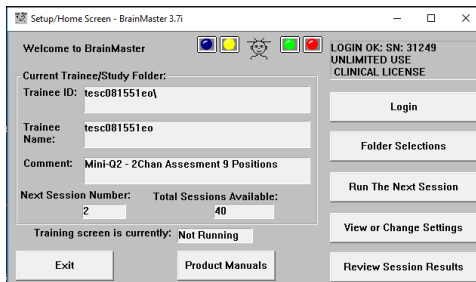
# Quick Setup

## Software Setup - Training/Assessment Setup

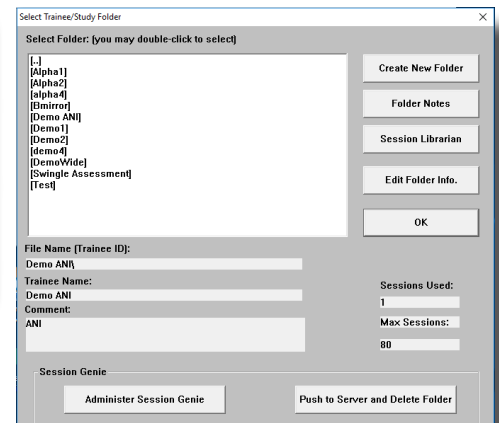
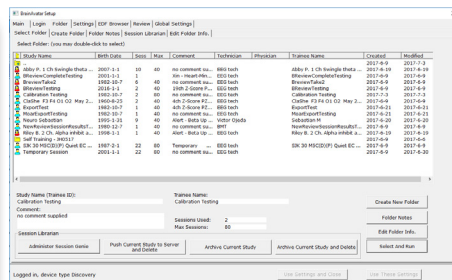
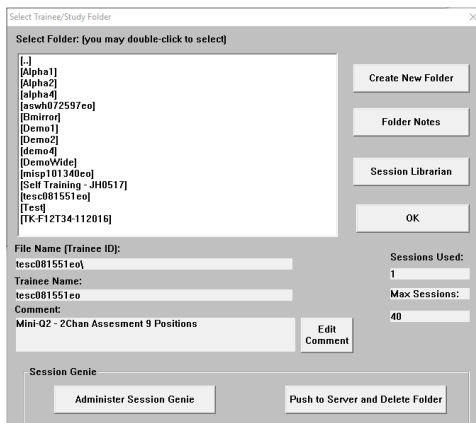
1. Open the Proper Software for your purchase, by double-clicking the icon on your desktop, if not already open.



2. After the software opens, click the Login Selection Button, or Folder Tab, in order to login to the software for use

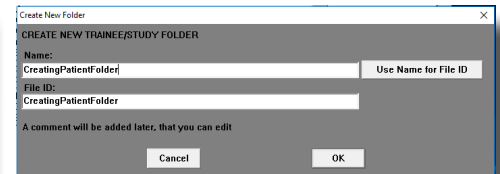
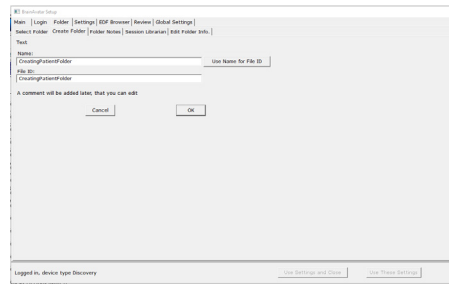
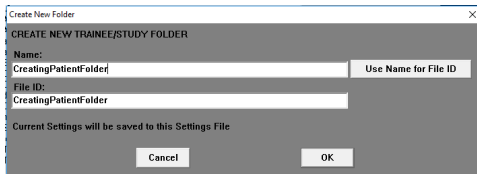


3. Click Create New Folder

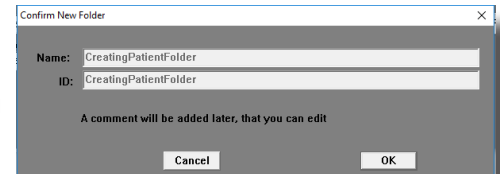
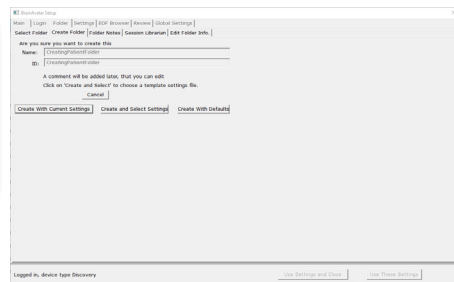
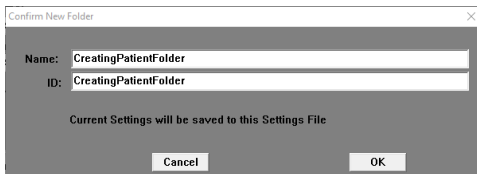


# Quick Setup

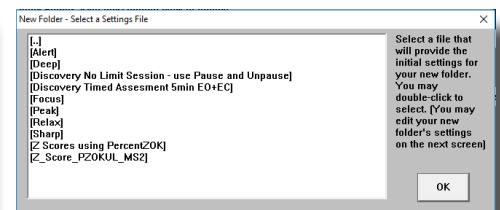
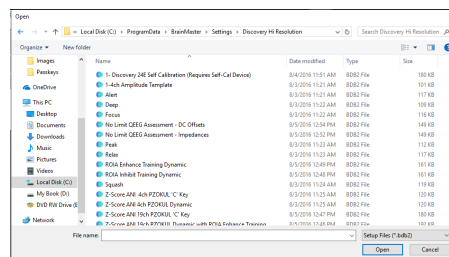
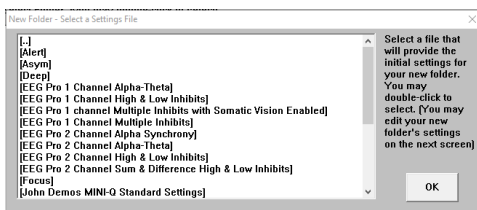
4. Type in the name that you would like and the file ID for the folder in the proper fields. When naming the folder, use a numerical code that you will need to record this in a confidential file.



5. The following screen will prompt you to confirm the name of the folder (BrainAvatar will simply show the name). Click OK to continue (BrainAvatar click Create and Select Settings).



6. Choose the protocol that you would like to utilize for training.



# Quick Setup

- Fill out the patient information, as well as any additional information you would like contained for this patient file. Click OK or Save and Continue when complete (This screen will not appear in BrainMaster 3.0 Series Software).

You have now created a Training/Assessment Folder that is ready to use. You can tell this has been completed, as you will see the Setup/Home Screen stating that the current ID and name as you defined for this folder (BrainAvatar will be on the Folder Selection Tab). To train/Assess this client, simply click Run the Next Session to begin (BrainAvatar, simply close the Setup Screen).



# Protocol Overview

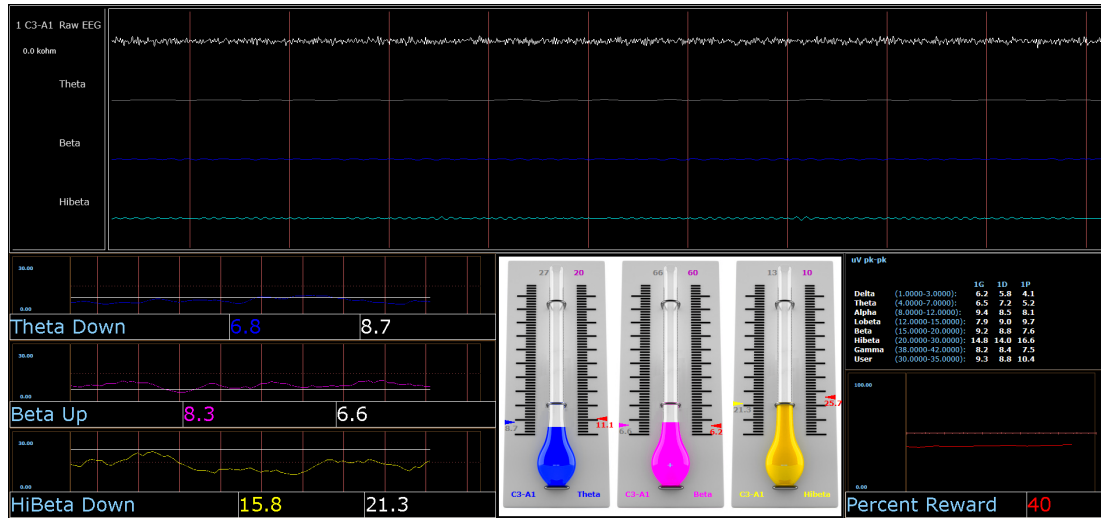
## Basic Protocol Information

Protocol	Training	Default Location(s)
Alert	Theta & Hbeta Inhibited, Beta Rewarded with a reward tone when all criteria is met	C3
Deep	Alpha & Theta with Reward each band with its own reward tone	Pz
Focus	Theta & Hbeta Inhibited, Lobeta Rewarded with a reward tone when all criteria is met	C4
Peak	Alpha Coherence Training to reward with a MIDI tone when the coherence is above the threshold	O1, O2
Relax	Theta & Hbeta Inhibited, Alpha Rewarded with a MIDI reward tone when all criteria is met	C4
Squash	Wideband Single inhibit that rewards with a MIDI tone when the criteria is met	Cz
ROI Training Only Head Select Enhance	Single Band Reward based on the band and location selected using the 3D Head Map with a reward tone when the criteria is met	All 10/20 Sites
ROI Training Only Head Select Inhibit	Single Band Inhibit based on the band and location selected using the 3D Head Map with a reward tone when the criteria is met	All 10/20 Sites
Z-Score PZOK 4ch	Trains the percentage of Z-Scores that are falling between +/- your defined range, rewards with a MIDI tone when above your defined Threshold	C3, C4, P3, P4
Z-Score PZOKUL 4ch	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above your defined Threshold	C3, C4, P3, P4
Z-Score PZOKUL 4ch Dynamic	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above the Dynamic Threshold	C3, C4, P3, P4
Z-Score PZOK 19ch	Trains the percentage of Z-Scores that are falling between +/- your defined range, rewards with a MIDI tone when above your defined Threshold	All 10/20 Sites
Z-Score PZOKUL 19ch	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above your defined Threshold	All 10/20 Sites
Z-Score PZOKUL 19ch Dynamic	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above the Dynamic Threshold	All 10/20 Sites
Z-Score Using sLORETA Z Absolute Power	Single Band sLORETA Z-Score Absolute Power based on the band and location selected using the 3D Head Map with a MIDI tone when the value falls between the upper and lower range	All 10/20 Sites
Z-Score Using sLORETA PZOKUL	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above your defined Threshold	All ROI's All Bands
Z-Score Using sLORETA PZOKUL Dynamic	Trains the percentage of Z-Scores that are falling between your upper and lower range, rewards with a MIDI tone when above the Dynamic Threshold	All ROI's All Bands



# Protocol Overview

## ***Alert – Beta Up Theta and Hibeta Down***



### **Basic Overview**

Alert is known more generally as beta training. It consists of a reward on increasing beta, with inhibits placed on theta and hibeta. This protocol is generally applied at C3. When all criteria are met for 500 milliseconds the trainee will get a reward tone (.wav)

### **Default Settings**

Threshold Updating is set to auto-update repeat: after pre-baseline and after each run. This protocol is set to update 10 times, every 120 seconds (20 minute session).

### **Percent Time over Threshold Hot Keys**

't' increase Theta – 'Shift T' to decrease Theta

'b' increase Beta – 'Shift B' to decrease Beta

'h' increase Hibeta – 'Shift H' to decrease Hibeta

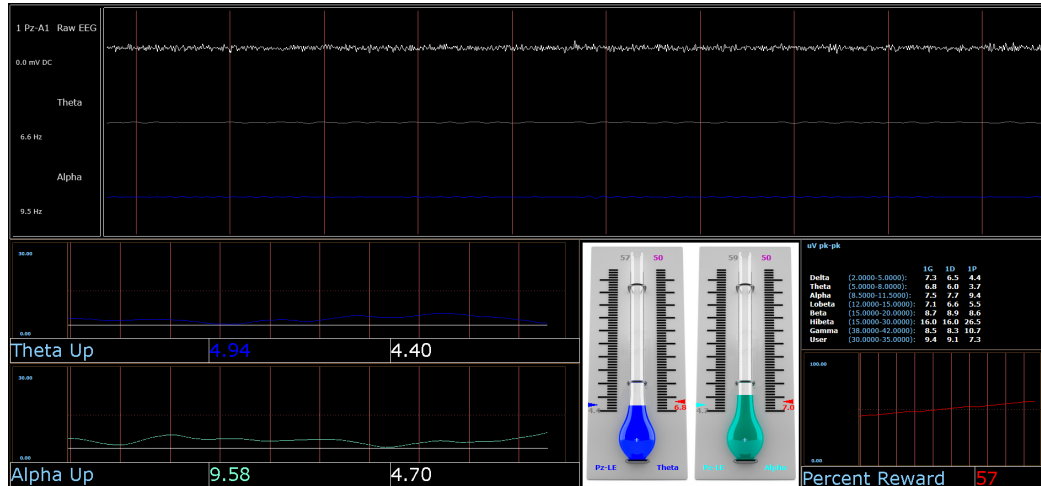
Note: 'y' key can be used to manually update at any time

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

**Note: All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended feedback.**

# Protocol Overview

## *Deep – Theta Alpha Up*



### Basic Overview

Deep is known as alpha/theta training. It consists of a reward on increasing alpha and theta. This protocol is generally applied at Pz. When each band criteria is met for 500 milliseconds the trainee will get a reward tone for each band.

### Default Settings

Threshold Updating is set to auto-update repeat: after pre-baseline and after each run. This protocol is set to update 10 times every 180 seconds (30 minute session).

### Percent Time over Threshold Hot Keys

't' increase Theta – 'Shift T' to decrease Theta

'a' increase Alpha – 'Shift A' to decrease Alpha

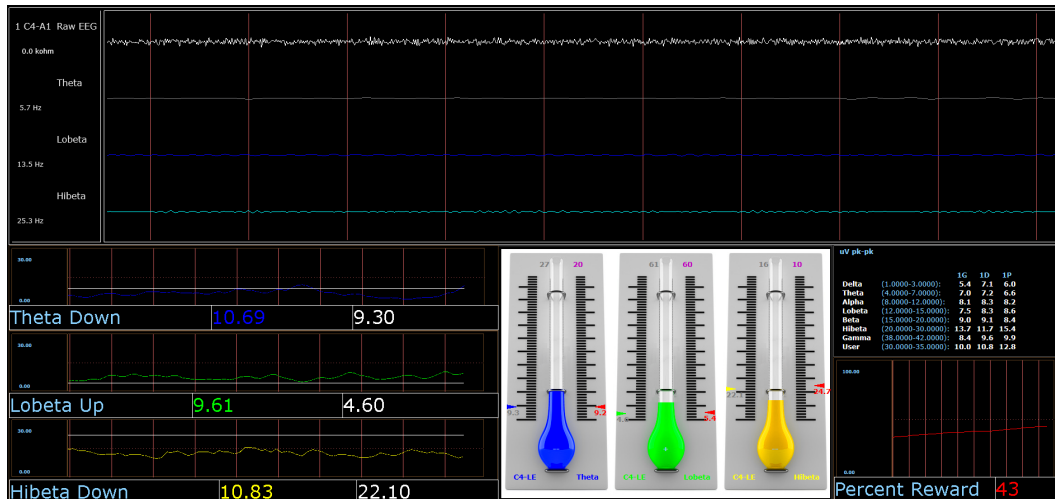
Note: 'y' key can be used to manually update at any time

This protocol is set up to work with EEG Audio, BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

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# Protocol Overview

## ***Focus – Lobeta Up Theta and Hibeta Down***



### **Basic Overview**

Focus is known more generally as beta training. It consists of a reward on increasing lobeta, with inhibits placed on theta and hibeta. This protocol is generally applied at C4. When all criteria are met for 500 milliseconds the trainee will get a reward tone (.wav)

### **Default Settings**

Threshold Updating is set to auto-update repeat: after pre-baseline and after each run. This protocol is set to update 10 times every 120 seconds (20 minute session).

### **Percent Time over Threshold Hot Keys**

't' increase Theta – 'Shift T' to decrease Theta

'l' increase Lobeta – 'Shift L' to decrease Lobeta

'h' increase Hibeta – 'Shift H' to decrease Hibeta

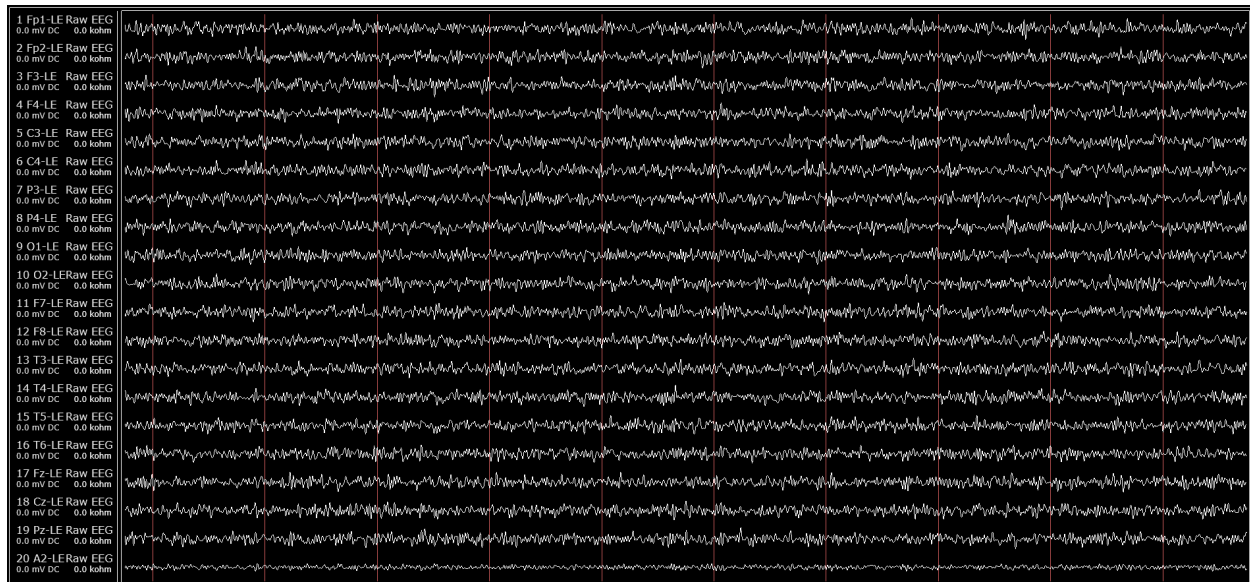
Note: 'y' key can be used to manually update at any time

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

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# Protocol Overview

## ***No Limit QEEG Assessment(BrainAvatar/Discovery Only)***



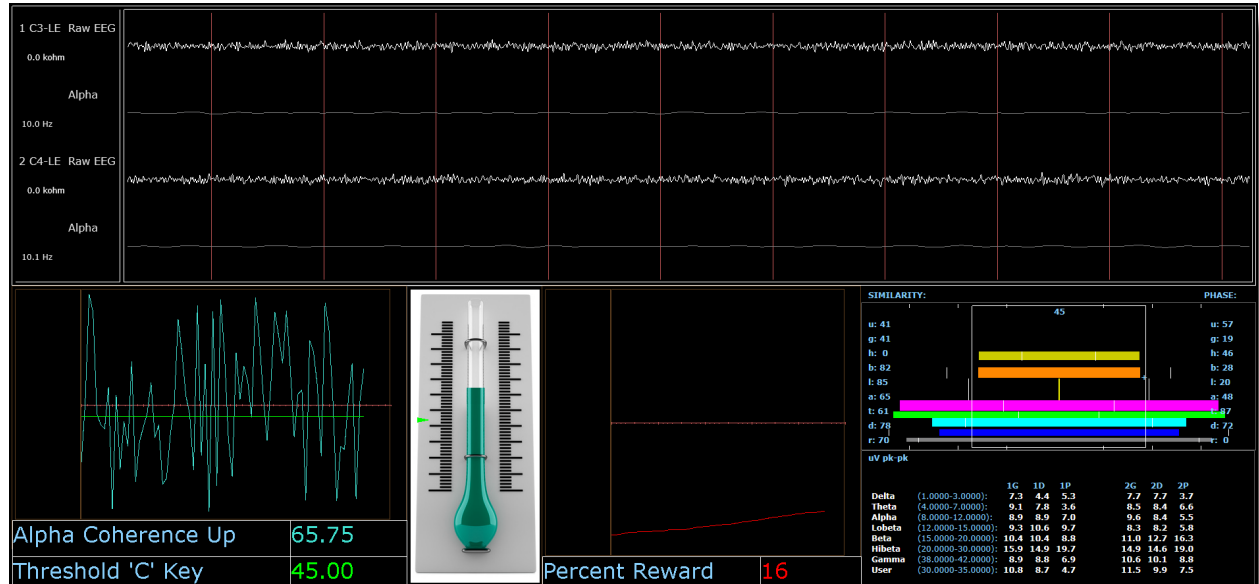
### Basic Overview

The No Limit QEEG Assessment file is acquiring the standard sensor positions defined by the 10-20 system. The recording condition can be changed on the fly from the condition drop down menu at the top of the BrainAvatar window. Each time the condition is changed from the drop down menu a new EDF is created. The observed offset values on the acquisition screen in BrainAvatar software is generally useful for assessing sensor connection quality

**Note: All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended use.**

# Protocol Overview

## Peak – Alpha Coherence Up



### Basic Overview

Peak is a more specific type of alpha training. Peak's goal is achieving a coherent state between the left and right hemispheres in the alpha band (8-12 Hz). Eyes are generally closed when using the 'peak' protocol. This protocol is generally applied at C3 and C4. When the alpha coherence is above the training threshold the trainee will get an event sound (MIDI Tone).

### Default Settings

Protocol is *not* set to auto-threshold, and session is set to run for 20 minutes.

### Threshold Hot Keys

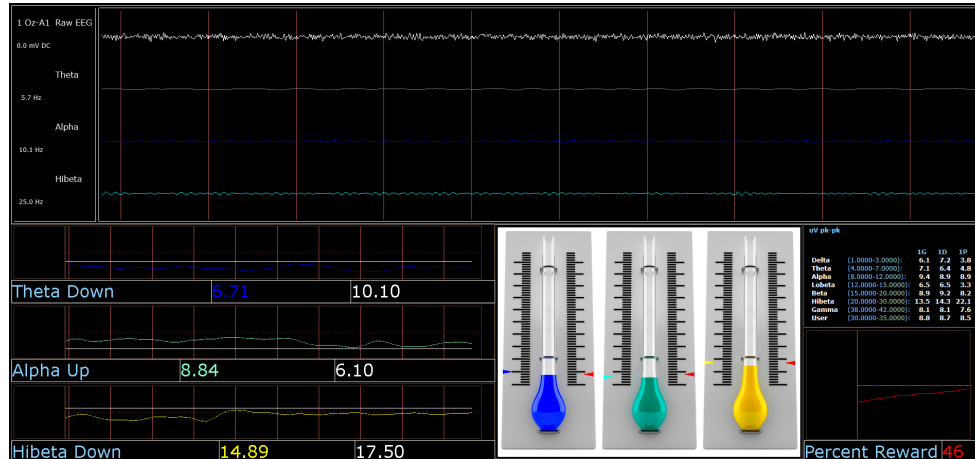
'c' increase Coherence Threshold – 'Shift C' to decrease Coherence Threshold

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (e.g. InnerTube, Particle Editor, Zukor)

**Note: All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended feedback.**

# Protocol Overview

## Relax – Alpha Up Theta Hibeta Down



### Basic Overview

Relax (is a classic) alpha protocol. It consists of a reward on increasing alpha, with inhibits placed on theta and hibeta. This protocol is generally applied at Oz. When all criteria are met for 500 millisecond's the trainee will get a reward tone (.wav)

### Default Settings

Threshold Updating is set to auto-update repeat: after pre-baseline and after each run. This protocol is set to update 10 times every 120 seconds (20 minute session).

### Percent Time over Threshold Hot Keys

'a' increase Alpha – 'Shift A' to decrease Alpha

't' increase Theta – 'Shift T' to decrease Theta

'h' increase Hibeta – 'Shift H' to decrease Hibeta

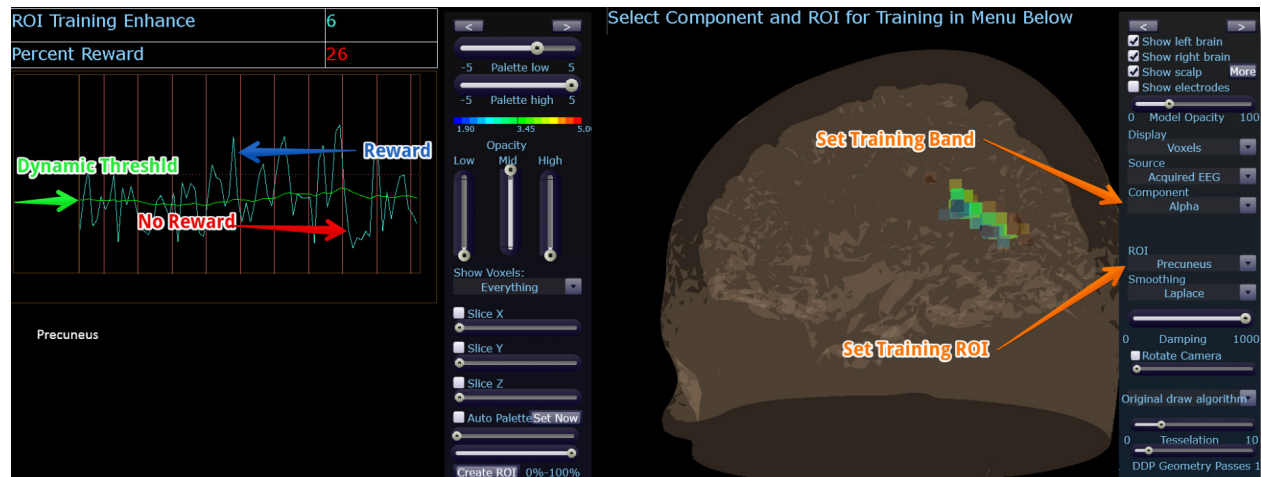
Note: 'y' key can be used to manually update at any time

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (e.g. InnerTube, Particle Editor, Zukor)

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# Protocol Overview

## ROIA – Region of Interest Enhance/Inhibit Train(BrainAvatar Only)



### Basic Overview

ROIA Enhance or Inhibit is a protocol that requires the standard 10/20 sites acquired. This settings file is set to up train the band and region of interest defined in the component and ROI drop down menu in the 3D head display. When criteria is met for the trainee will get an event sound (MIDI Tone).

### Default Settings

Threshold is set to dynamically adjust which will reward trainee about 50-60% throughout the training session. This settings file is set to run for 20 minutes

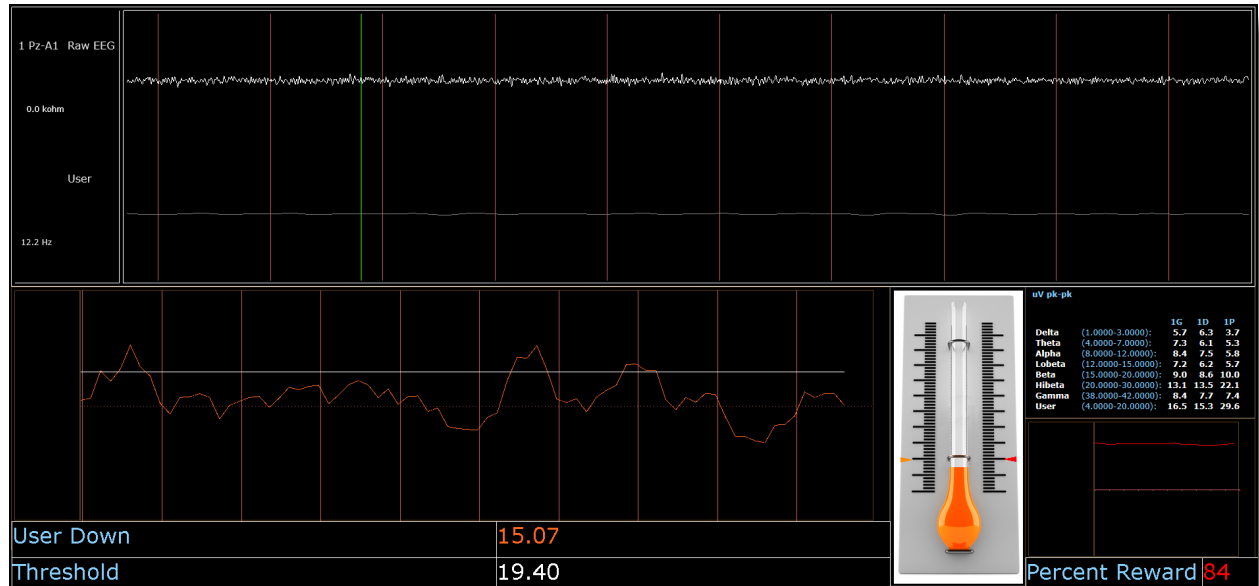
This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

**Please Note:** The following on the fly adjustments DO NOT apply to all settings file designs training region of interest amplitude. The settings file explained above is designed to make on the fly adjustments from the drop down menu. The following equation in the Event Wizard is required in order to make these adjustments on the fly:  $x = \text{LoretaROI}(\text{SELECTROI}, \text{SELECTBAND});$

**Note:** All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended feedback.

# Protocol Overview

## *Squash – Wideband Inhibit*



### Basic Overview

Squash is a protocol that consists of inhibits placed on four bands, spanning the range from 4-20 Hz. This protocol is generally applied at Cz. When criteria is met the trainee will get an event sound (MIDI Tone).

### Default Settings

Threshold Updating is set to auto-update repeat: after pre-baseline and after each run. This protocol is set to update 10 times, every 120 seconds (20 minute session).

### Percent Time over Threshold Hot Keys

'u' increase User – 'Shift U' to decrease User

Note: 'y' key can be used to manually update at any time

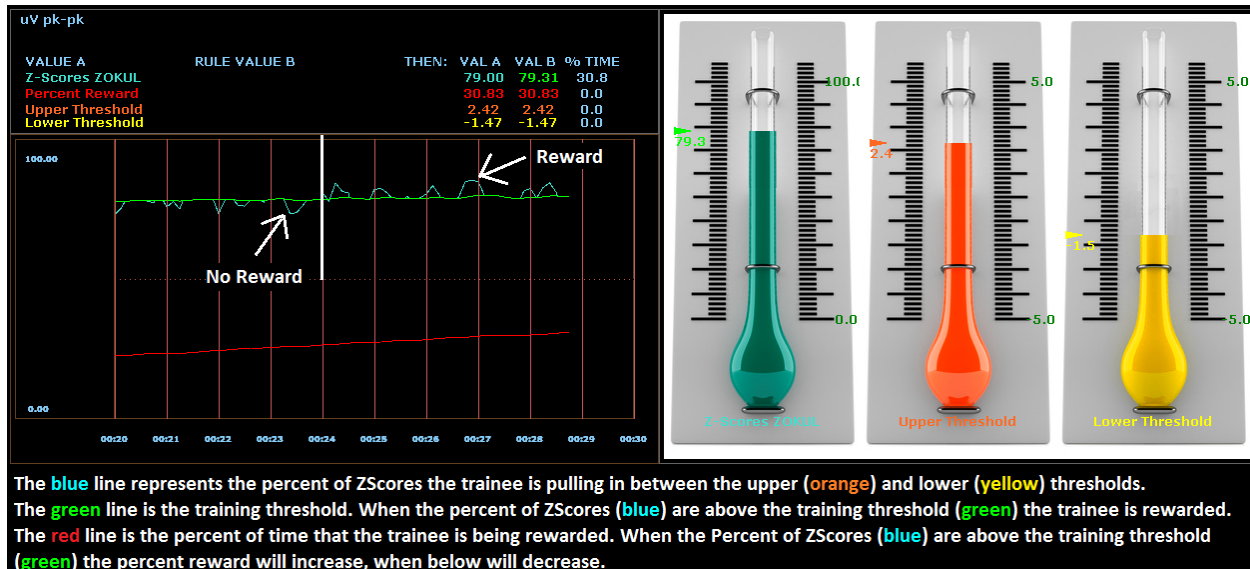
This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

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# Protocol Overview

## Z-Score PZOKUL Dynamic and Z-Score PZOKUL 'C' Key



### Basic Overview

Z-Score training is a scientifically designed software approach which will analyze selected training; compare those sites with a normative database, and reward the Z-Scores that fit within the desired upper and lower limits (database e.g. ANI, BrainDX, qEEG Pro). Z-Score PZOKUL Dynamic protocol has a training threshold that will auto adjust based on the percent of Z-Scores the trainee is pulling in between the upper and lower limits. Z-Scores PZOKUL 'C' Key - is used when one wants to manually adjust the training threshold. When the trainee's percent of Z-Scores are above the training threshold the trainee will get a reward tone.

### Threshold Hot Keys

'u' increase Upper Threshold – 'Shift U' to decrease Upper Threshold

'l' increase Lower Threshold – 'Shift L' to decrease Lower Threshold

### Z-Scores PZOKUL 'C' Key - Threshold Hot Keys

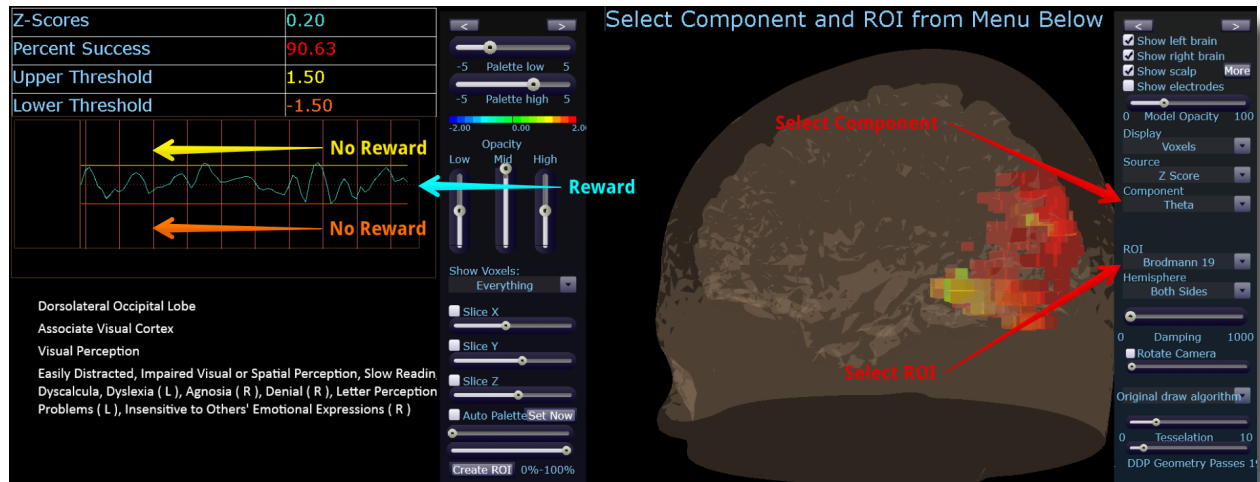
'c' increase Controlled Threshold – 'Shift C' to decrease Controlled Threshold

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (e.g. InnerTube, Particle Editor, Zukor)

**Note: All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended feedback.**

# Protocol Overview

## ***Z-Score sLORETA Absolute Power – Training a single Region of Interest and a single band to a normative database (BrainAvatar Only)***



### **Basic Overview**

Z-Score sLORETA Absolute Power training is a scientifically designed software approach which will analyze selected training compare those regions of interest with a normative database, and reward the Z-Scores that fit within the desired upper and lower limits (database e.g. BrainDX, qEEG Pro). This is a settings file that requires the standard 10/20 sites. Z-Score sLORETA Absolute Power settings file will reward the trainee when the selected training perimeter is in-between the upper and lower threshold. The region of interest and component are adjusted from the Live LORETA Projector drop down menu.

### **Default Settings**

Threshold is set to dynamically adjust which will reward trainee about 50-60% throughout the training session. This settings file is set to run for 20 minutes

### **Threshold Hot Keys**

'u' increase Upper Threshold – 'Shift U' to decrease Upper Threshold

'l' increase Lower Threshold – 'Shift L' to decrease Lower Threshold

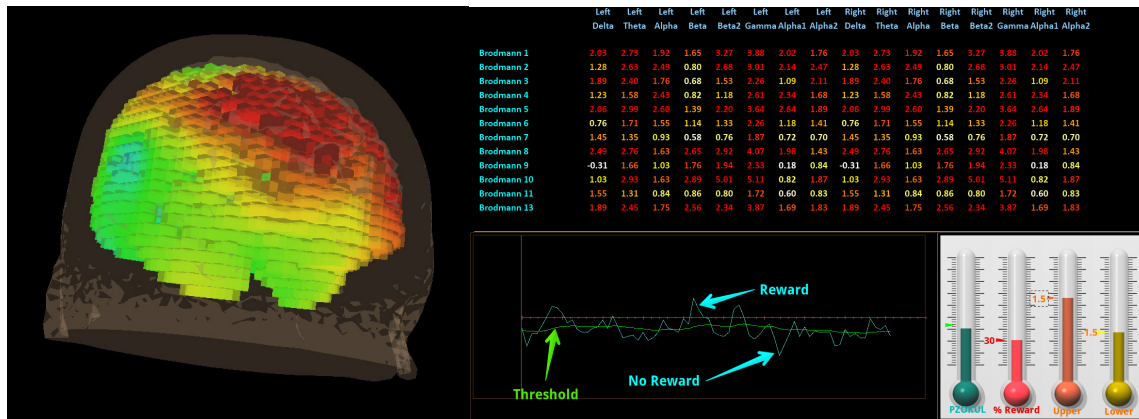
This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

**Please Note:** The following on the fly adjustments DO NOT apply to all settings file designs training region of interest sLORETA Absolute Power. The settings file explained above is designed to make on the fly adjustments from the drop down menu. The following equation in the Event Wizard is required in order to make these adjustments on the fly:  $x = \text{LoretaROI} \cdot \text{ZAP}(\text{SELECTROI}, \text{SELECTBAND})$ ;

**Note:** All designs provided by BrainMaster, are for demonstration and illustration purposes only. It is the clinician's responsibility to ensure that any designs used provide the intended feedback.

# Protocol Overview

## **Z-Score sLORETA PZOKUL Dynamic and Z-Score sLORETA PZOKUL 'C' Key – Training multiple regions of interest and multiple bands to a normative database (BrainAvatar Only)**



### Basic Overview

sLORETA Z-Score training is a scientifically designed software approach which will analyze selected training compare those regions of interest with a normative database, and reward the Z-Scores that fit within the desired upper and lower limits (database e.g. BrainDX, qEEG Pro). This is a settings file that requires the standard 10/20 sites. Z-Score PZOKUL Dynamic protocol has a training threshold that will auto adjust based on the percent of Z-Scores the trainee is pulling in between the upper and lower limits. Z-Scores PZOKUL 'C' Key - is used when one wants to manually adjust the training threshold. When the trainee's percent of Z-Scores are above the training threshold the trainee will get a reward tone.

Training location are setup within the BrainAvatar Z-Score Setup. Left click on the regions to train, then right click over the regions to customize training bands.

### Threshold Hot Keys

'u' increase Upper Threshold – 'Shift U' to decrease Upper Threshold

'l' increase Lower Threshold – 'Shift L' to decrease Lower Threshold

### Z-Scores PZOKUL 'C' Key - Threshold Hot Keys

'c' increase Controlled Threshold – 'Shift C' to decrease Controlled Threshold

This protocol is set up to work with the BrainMaster DVD player, Flash Player, Dimmer, Multi Media Player, and third party games (E.g. InnerTube, Particle Editor, Zukor)

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