PercentZOKUL Mark Smith Set-up Guide

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Create New Protocol

- 1. Open the Brainmaster software from the desktop.
- 2. Click on Folder Selections.

🕱 Setup/Home Screen - BrainMaster 3.4	🛛
Welcome to BrainMaster 🛛 🖸 🕁 🞑 🥥	LOGIN OK: SN: 30156 UNLIMITED USE
Current Trainee/Study Folder:	CLINICAL LICENSE
Trainee ID: Test	Login
Trainee Standard Test Study Name:	Folder Selections
Comment: Z Score PercentZOKUL MS	Run The Next Session
Next Session Number: Total Sessions Available:	
Training screen is currently: Not Running	View or Change Settings
Exit Product Manuals	Review Session Results

3. Select <u>Create New Folder.</u>

Select Trainee/Study Folder		×
Select Folder: (you may double-click to select)		
[] [1234] [4Channel_Synchrony[1]] [Adelphi] [Adonis] [Albee] [Alfalfa] [Alfalfa] [Allover] [Alpha1] [Alpha2] [alpha4] [Always] [Amanda fz t3 f7 f3 downtraining 4- 5 hz] [Apple] [Ardous] [Articulate]	Create New Folde	r
File Name (Trainee ID): Alfalfa\	Sessions Us	ed:
Trainee Name: Alfalfa Comment:	0 Max Session	ıs:
(none)	Edit Comment	
Session Genie Administer Session Genie	Push to Server and Delete Folder	

4. In Create New Folder dialogue box place the curser in the name field and type the clients name.

Create New Folder	\mathbf{X}
CREATE NEW TRAINEE/STUDY FOLDER	
Name:	
AlbeeP3P4	Use Name for File ID
File ID:	
AlbeeP3P4	
A comment will be added later, that you can edit	
Cancel OK	

- 5. Place the curser in the File ID field and create a file ID. Suggestion: use the clients last name plus the 10/20 sites to be trained. Suggestion: select Use Name for File ID for easy identification.
- 6. Click OK in the Create New Folder dialogue box.
- 7. Click OK in the Confirm New Folder dialogue box.

8. In the New Folder-Select a Settings File dialogue box, scroll down to the Z Score <u>PercentZOK</u> MS2 settings file and select it by highlighting the name of the file and click on OK.



- 9. In the Setup/Home Screen select View or Change Settings
- 10. The Setup Options screen opens. Select Data Channels.

Setup Options			\mathbf{X}
Read/Write Settings File	Current Trainee/Study: AlbeeP3P4		
Data Channels	NCHANS: 4 SRATE: 256 FILTER: 3 ARTIFACT: 255 uV COM: 5 - SUMCHANS:OFF - SAVEEEG:ON - P-P:ON SITES 1/2: C3 - LE - GND - LE - C4 3/4: P3 - LE - GND - LE - P4		
Frequency Bands	Theta:4.000-7.000 Alph	a:8.000-12.000 Lobeta:	12.000-15.000
Training Protocol	GO: (none) STOP: (none) AUTO:OFI	F:50/20/10	
Display Options	Display: wave, training	stats, wide event trend	ls, z-scores,
Feedback Control	Sound: Event Sounds -		
Session Control	0 SESSIONS -NO BASELINES-10 RUNS OF LENGTH: 2.0 MIN-NO PAUSE BETWEEN RUNS-SESSION TYPE: Simulation		
CLOSE	PRINT SETTINGS	Event Wizard	USE THESE SETTINGS

11. In the Data Channels dialogue box confirm that the four channel option is selected under the EEG Channels heading.

Data Channels	\mathbf{X}		
EEG Channels: One OnIR HEG Two Four PIR HEG or TEMP	Software Digital Filter Order: 1 2 • 3 4 5 6 7 8 9 10 lower order is faster higher order is more selective		
Sum-Channel Mode: ON OFF	Atlantis Hardware Control		
-4-channel Sum Method:	Amplitude Scale:		
🔿 Split 💿 Combine	Peak-to-Peak ORMS		
-Save EEG to Disk:	Artifact Threshold:		
• ON OFF	255 microvolts		
Software Notch Filters: 60 Hz Notch Filter			
EEG Data Sampling Rate	e:		
🔿 120 sps	256 sps		
COM Port Select: Enter COM Port Number (1, 2, 3,, 32) 5			
Search this PC for Available COM Ports			
Cancel Electrode	es & Trainee Info OK		

12. In the Data Channels dialogue box select the <u>Electrodes and Trainee Info</u> button.

13. In the Electrode and Trainee Info dialogue box place the four 10/20 sites to be trained under Active 1, Active 2, Active 3, and Active 4 by selecting the down arrow under each heading and highlighting the appropriate 10/20 site.

Electrode and Tr	ainee Informat	ion			\mathbf{X}
Active 1	Reference 1	GROUND	Reference 2	Active 2	
C3 🗸	LE 🔻	GND 🔻	LE 🔻	C4 -	
Active 3	Reference 3		Reference 4	Active 4	
P3 🔻	LE 🔻		LE 🔻	P4 🔻	
FP1 FP2 F7 F3 F2 F4 F8 T3 C3 C2 C4 T4 A1 T5 P3 P2 P4 T6 A2 O1 O2 O2					
Use Session (use for Mil	on Wizard to c NI-Q)	ontrol sessio	n Sessi	ion Wizard	
Age: (optional - must be nonzero to use Z-Score Training) 40					
Cancel Condition: (required for Z-Score Training) • eyes open • eyes closed OK					

- 14. Place the clients age in the box labeled: Age (Optional-must be nonzero to use Z Score Training).
- 15. Select Eyes Open or Eyes Closed under the heading: Condition (required for Z Score Training)
- 16. Click OK at the bottom of the Electrode and Trainee info dialogue box and the OK again in the Data Channels Dialogue box.
- 17. You are now back in the Setup Options dialogue box. Select the <u>Session Control</u> button. Under the Number of Sessions heading place the number of sessions desired in the box.



- 18. Under the Session Type heading select Training.
- 19. Select OK at the bottom of the Session Control dialogue box.
- 20. Select Use These Settings at the bottom of Setup Options dialogue box.
- 21. You are now ready to begin training.

<u>Training</u>

- 1. Open the Brainmaster software from your desktop.
- 2. In the Setup/Home Screen select the <u>Folder Selections</u> button.

💆 Setup/Home Screen - BrainMaster 3.4	_ 🗆 🔀
Welcome to BrainMaster 🛛 🖸 🕁 🖆 🥌	LOGIN OK: SN: 30156 UNLIMITED USE
Current Trainee/Study Folder:	CLINICAL LICENSE
Trainee ID: Test	
	Login
Trainee Standard Test Study	
Name:	Folder Selections
Comment: Z Score PercentZOKUL MS	
Next Session Number: Total Sessions Available:	Run The Next Session
1 repeatable	
Training screen is currently: Not Running	View or Change Settings
Exit Product Manuals	Review Session Results

3. Scroll down to the client folder, highlight, and select OK.

Select Trainee/Study Folder		\mathbf{X}
Select Folder: (you may double-click to select)		
[] [1234] [4Channel_Synchrony[1]] [Adelphi] [Adonis]		Create New Folder
[Albee] [AlbeeP3P4]	_	Folder Notes
[AldousP3P4] [Alfalfa]		
[Allover] [Alpha1] [Alpha2] [alpha4]		Session Librarian
[Always] [Amanda fz t3 f7 f3 downtraining 4- 5 hz] [Apple]	~	ОК
File Name (Trainee ID):		Sections Liced
AlbeeP3P4\		0
Trainee Name:		
AlbeeP3P4		Max Sessions:
Z Score PercentZOKUL MS	Edit Comment	0
Session Genie		
Administer Session Genie	Push to Server	and Delete Folder

4. In the Setup/Home Screen select the <u>Run the Next Session</u> button.

5. In the Training/Control Screen select GO.



6. In the Master3O dialogue box confirm your selection of 10/20 sites then select OK.



7. In the following Master30 dialogue box with the sub-heading Initializing Z Score Training, confirm Age and Condition, i.e., Eyes Open or Closed, then select Yes.

master:	30
1	Initializing Z Score Training: Age: 40 Eyes: open Sites: C3: (BMr 14 -> NG 4) C4: (BMr 16 -> NG 5) P3: (BMr 21 -> NG 6) P4: (BMr 23 -> NG 7) Sampling Rate: 256 (to NeuroGuide = 128) Do you wish to use these parameters for Z-Score training? <u>Yes</u> <u>No</u>

8. In the last Master30 dialogue box select OK when the signal is good to begin training.

master3	0 🔀		
	Simulation is Running!		
	To Start this Session,		
	Press OK When EEG Signal is Good!		
	Press Cancel to Cancel this Session for now		
	Cancel		

Display Freq.Bands Color GO STOP Window Clock: 16:10 Points: 000 Component Bandwidth Grand Avg. Delta (100-3.00) 36 38 37 36	1
GO STOP Window Clock: 16:10 Points: 000 Close Component Bandwidth Grand Avg. Damped Avg. KEnergy Delta (1.00-3.00): 3.6 3.8 3.7 3.6 9.1 5.9	
Component Bandwidth Grand Avg. Damped Avg. % Energy	
Other (14.007.00) 5.2 4.8 4.9 5.0 1.3.3 Alpha (8.00-12.00) 5.9 5.4 5.3 5.6 12.0 15.4 Lobeta (12.00-15.01) 5.1 5.3 5.0 5.0 9.1 7.8 Beta (15.00-20.01) 6.7 6.8 6.8 6.3 14.6 11.8 Hibeta (20.00-30.01) 8.9 8.7 8.7 8.3 26.0 22.6 80.0 Gamma (38.00-42.01) 2.1 2.2 2.1 2.2 0.0 0.0 User (30.00-35.01) 4.4 4.9 4.9 4.8 4.2 2.3	96.3
VALUE A RULE VALUE B THEN: VAL A VAL B % TIME x=PercentZOKUL[UTHR, -GTHR]; GT x=CT; tone 86.00 96.3 x=E1F; percent reward GT x=E1F; nothing 55.25 96.25 0.0 x=GTHR; /// "g" key = lower GT x=GTHR; nothing -2.00 2.00 0.0 x=UTHR; // "u" key = upper GT 0.5 nothing 1.00 0.50 96.3	- 2.0
-20.0	2.0 ≘
SITES: C3 C4 [E0] Abs Rel Rat/T Rat/B Rat/G SITES: P3 P4 [E0] Abs Rel Rat/T Rat/B Rat/G Delta [1.0-4.0] -0.3 -0.4 -0.2 0.1 -0.7 -1.0 Delta [1.0-4.0] -0.5 -0.3 -0.2 0.1 -0.7 -1.3 Theta [4.0-8.0] -0.0 -0.1 0.3 -0.5 -0.7 Theta [4.0-8.0] -0.2 -0.1 0.3 -0.5 -1.1 Alpha [8.0-12.5] -0.3 -0.5 -0.7 -0.9 Alpha [6.0-12.5] -0.6 -0.6 -0.8 -1.3 Beta [12.525.5] 0.6 0.7 -0.3 Beta [12.52.55.5] 0.5 5 -7 -0.6 Beta 1 [12.0-15.5] 1.0 0.9 -0.3 Beta [12.52.55.5] 0.5 0.7 -0.6 Beta 1 [12.0-15.5] 1.0 0.9	
Delta [1.0-4.0] 0.4 -0.4 -0.3 -0.0 -0.7 -1.0 Delta [1.0-4.0] -0.5 -0.4 -0.3 0.2 -0.8 -1.3 Theta [4.0-8.0] 0.1 0.1 0.1 0.3 -0.3 -0.7 Theta [4.0-8.0] -0.0 0.1 0.5 -0.4 -0.9 Alpha [8.0-12.5] 0.3 -0.4 -0.6 -0.9 Alpha [8.0-12.5] -0.6 -0.7 -0.9 -1.3 Beta [12.5-25.5] 0.5 0.6 -0.4 Beta [12.0-15.5] 1.2 1.2 Beta [12.0-15.5] 1.0 1.0 Beta [12.0-15.5] 1.2 1.2 Beta 2 [15.0-16.0] 0.4 0.4 Beta 2 [15.0-18.0] 0.5 0.6 -0.5 Beta 3 [18.0-25.5] 0.3 0.3 Beta 3 [18.0-25.5] 0.5 0.7 -1.3 Gamma (25.5-30.5) 0.6 0.6 0.8 0.3 -1.5	

- 9. The positive Z scores are adjusted with the "u" key. Raise the positive Z score by typing u on the keyboard. Lower the positive Z score by holding the Shift key down and pressing the "u" key. The default is +2 STD.
- 10. The size of the positive Z score can be confirmed by looking at the number to the right of the orange line in the Event 1-4 graph. The size of the positive Z score can also be confirmed by examining the third number from the top in columns Val A or Val B.
- 11. The negative Z scores are adjusted with the "g" key. Raise the negative score by typing "g" on the keyboard. Lower the negative Z score by holding the Shift key down and pressing the "g" key. The default is -2 STD.
- 12. The size of the positive Z score can be confirmed by looking at the number to right of the yellow line in the Event 1-4 graph. The size of the negative Z score can also be confirmed by examining the fourth number from the top in columns Val A or Val B.
- 13. The percentage of Z scores that must be met in order for the client to receive a reward is adjusted with the "c" Key. Press "c" to raise the percentage of Z scores. Hold down the Shift key while pressing the "c" key to lower the percentage of Z scores.

- 14. The percentage of Z scores that must be met to produce a reward for the client is confirmed by examining the first number in column Val B. It is also confirmed by examining the number to the right of the green line in the Wide Trends (events) graphic.
- 15. The actual percentage of Z scores that is being captured by the Z score window is confirmed by examining the first number in column Val A.
- 16. The percentage of time that reward criteria are being met is confirmed by the first number in column % Time. It is also confirmed by examining the number to the right of the red line in the Wide Trend (events) graphic.