BrainMaster MINI-Q II User's Manual

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Introduction

This manual describes how to use the Atlantis MINI-Q 2 to acquire EEG data from the BrainMaster Atlantis 2-channel and 4-channel devices.

Using the MINI-Q, you can acquire up to 18 different sites in 9 "passes" with an Atlantis II 2-channel device, or 20 different sites in 5 "passes" with an Atlantis 4-channel device.

MINI-Q data can be reviewed manually, can be sent to qualified services for interpretation, and can be processed with third-party softwrare.

This software and hardware are supported by the BrainMaster 3.2 and later software.

For the BrainMaster software, you may use the following web site:

www.brainm.com/software/3.0

The MINI-Q 2 is designed to work with the ElectroCap International cap type "E1-LEX". This cap has built-in connections for the linked ears. In addition, if the cap includes the optional non 10-20 site Oz (on pin12 of the 25-pin connector), the MINI-Q hardware and software will use it.

NOTE:

The following procedures produce either 18-channel or 20-channel data sets that can be reviewed manually, or imported into NeuroGuide (Applied Neurosciences, Inc.) With NeuroGuide, these datasets can produce whole-head topographic maps, z-scores, and connectivity maps of the channels that are recorded concurrently.

If you want to acquire a standard original format MINI-Q file (2 channels, 12 sites in 6 passes), you should access the existing setup files that are in the BrainMaster software, for the acquisition of a standard MINI-Q, including the setup files for the DCN128 software, for NewMind, etc. Refer to the existing documentation on the MINI-Q for procedures and details of the 12-channel acquisition and analysis.

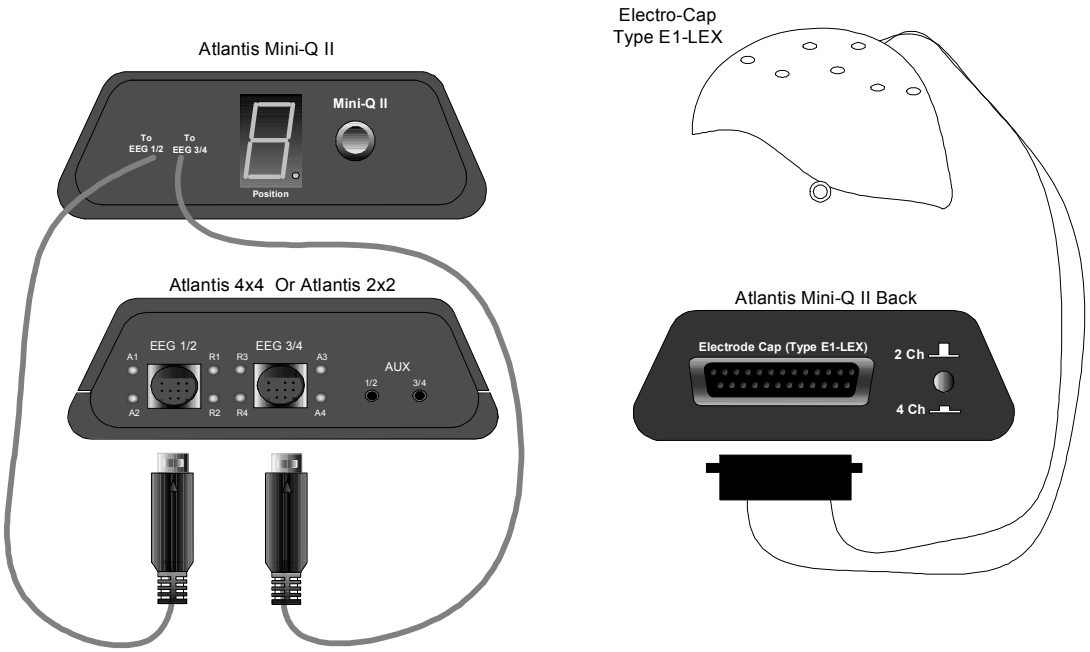
Connection Guide

The following drawing illustrates the proper connections between the MINI-Q II and the Atlantis 2-channel or 4-channel devices.

Place the MINI-Q II on top or alongside the Atlantis module.

Insert the input cables from the MINI-Q II into the inputs of the Atlantis module. If you have a 2-channel Atlantis, only the connection for channels EEG ½ will be used. With a 4-channel Atlantis, both the EEG ½ and the EEG ¾ cables are connected into their matching inputs.

Plug the 25-pin connector from the Electro-Cap into the rear connector of the Atlantis MINI-Q II. Insert the connector snugly, and ensure that it inserts fully into the rear of the chassis, The connector housing should push up against the MINI-Q II housing, as the sleeve of the connector inserts into the opening in the rear panel.

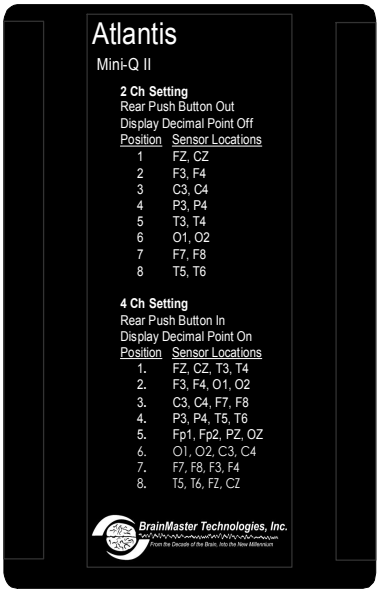


Atlantis Mini-Q II to Atlantis Connections

The MINI-Q II is powered directly from the Atlantis 2x2 or 4x4 module. The front panel indicator should light up as soon as the device is plugged into the Atlantis input socket. Note that the LED numeric indicator includes a decimal point, which indicates the position of the rear-panel pushbutton.

Top-panel illustration

The following illustration shows the top panel of the MINI-Q II.



Atlantis Mini-Q II Top Panel Illustration

The switch positions are shown with their respective 10-20 sensor site locations, as explained in the following section. Note that the 2-channel settings are shown with the rear push button OUT, and the 4-channel settings are shown with the rear pushbutton IN.

The sensors connected in position 5 are changed by the rear-panel push button, in the following way:

When the rear pushbutton is OUT (decimal point OFF), then position 5 provides T3, T4, Pz, and Cz.

When the rear pushbutton is IN, (decimal point ON), then position 5 provides Fp1, Fp2, Pz, and Cz.

This allows the MINI-Q II to work exactly like a MINI-Q for 6-pass recording, plus allow the 4-channel device to acquire all the channels in an efficient manner, providing 19 or 20 sites in 5 passes. It also provides the ability to acquire 2 channels in 9 passes, thus providing 18 sites in 9 passes.

Explanation of switch positions

The MINI-Q II has an 8-position switch on the front panel, to select the switch position. In addition, it has a rear pushbutton that provides access to a ninth position. This allows the device to perform identically to the original 6-position 2-channel MINI-Q, plus acquire 18 channels in 9 passes with a 2-channel device, plus operate with 4 channels in an extended mode. There is also a front-panel indicator that shows the switch position in an LED display.

The standard sites for the 2-channel mode, with the rear pushbutton OUT (decimal point off) are:

Position 1: Fz Cz

Position 2: F3 F4

Position 3: C3 C4

Position 4: P3 P4

Position 5: T3 T4 (will be Fp1 Fp2 with rear pushbutton IN)

Position 6: O1 O2

Position 7: F7 F8

Position 8: T5 T6

Note that when acquiring mini-q data, the 2-channel 9-pass method uses both the front-panel switch and the rear-panel pushbutton, to access a total of 9 sensor pairs, by acquiring in Position 5 with the pushbutton both out and in.

The standard sites for the 4-channel mode with the rear pushbutton IN (decimal point on) are:

Position 1: Fz Cz T3 T4

Position 2: F3 F4 O1 O2

Position 3: C3 C4 F7 F8

Position 4: P3 P4 T5 T6

Position 5: Fp1 Fp2 Pz Oz (will be T3 T4 Pz Oz with rear pushbutton OUT)

Position 6: O1 O1 C3 C4

Position 7: F7 F8 F3 F4

Position 8: T5 T6 Fz Cz

Note that when acquiring mini-q data, the 4-channel 5-pass method uses only the first 5 positions. The remaining 3 positions are available for training or other uses.

Brief Summary for using the BrainMaster "MINI-Q 2" Interface

The BrainMaster "MINI-Q 2" Interface is a switching device that connects between the trainee's EEG sensors and the BrainMaster Atlantis module that provides a simple, easy way to select different electrodes for recording. This provides the ability to perform quantitative EEG measurements using the 2- or 4- channel device, by recording different sets of electrode pairs, for sampling the EEG signal. Then, by processing and displaying the EEG data, it is possible to make a determination of the EEG component values at the various sensor locations.

The MINI-Q 2 is supported by the latest version of the 3.2 software, and later versions. Contact BrainMaster Technologies, to ensure that you have the latest software update on your PC.

To use the MINI-Q 2 device, use the following procedure:

1) If necessary, install the updated 3.2 or later software files to your PC. You may get these from the internet, (www.brainm.com/software/3.0).

2) Using the Folder Selections popup dialog, create a new study folder named "miniq test". When you see the "Choose a settings file" control, If you have an Atlantis 4x4, select the settings file: "MINI-Q 2 4-channel 60 second runs". If you have an Atlantis 2x2, select the settings file"MINI-Q 2 2-channel 60 second runs".

3) Place the MINI-Q box on top of or alongside the BrainMaster Atlantis module.

4) Make sure the rear button is out, and the display decimal point is OFF.

5) Connect all sensors to the trainee (using a cap), and plug the cap into the 25-pin receptacle labeled "Electrode Cap" on the rear of the MINI-Q box. The sensors that will be used are:

   2-channel: Fz Cz / F3 F4 / C3 C4 / P3 P4 / T3 T4 /Fp1 Fp2 / O1 O2 / F7 F8 / T5 T6

   4-channel: Fz Cz T3 T4 / F3 F4 O1 O2 / C3 C4 F7 F8 / P3 P4 T5 T6 / Fp1 Fp2 Pz (Oz)

6) Plug the leads coming from the MINI-Q box into the input connectors of the BrainMaster, in a "one-to-one" fashion, plugging the labeled wire into its matching input, e.g. "EEG 1/2 " or "EEG 3/4"

7) Place the MINI-Q selector switch on position "1" by turning the selector knob all the way to the left.

8) Click on "Run the next session" and follow the dialog boxes. When the training screen appears, click on the "GO" button. Inspect the waveform. If it is clean, click on the dialog box to begin the session. You will now be recording from **Fz and Cz** (2-channel) or from Fz Cz T3 and T4 (4-channel)

9) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwis**e. This will select the second set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **F3 and F4 (2-channel) or F3 F4 O1 and O2 (4-channel)**.

10) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwis**e. This will select the third set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **C3 and C4 (2-channel) or C3 C4 F7 and F8 (4-channel)**.

11) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwise**. This will select the fourth set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **P3 and P4 (2-channel) or P3 P4 T5 and T6 (4-channel).**

12) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwise**. This will select the fifth set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **T3 and T4 (2-channel) or Fp1 Fp2 Pz (and Oz if available) (4-channel).**

13) The system will record for 1 minute in this position, then pause. If you have a 4x4, you are now done. If you have a 2x2, **when the system pauses, immediately press the rear pushbutton so that it is IN**. This will select the sixth set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **Fp1 and Fp2.**

14) (2x2 only) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwise**. This will select the seventh set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **O1 and O2.**

15) (2x2 only) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwise**. This will select the eighth set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **F7 and F8.**

16) (2x2 only) The system will record for 1 minute in this position, then pause. **When the system pauses, immediately rotate the switch one position clockwise**. This will select the ninth set of sensors. When the signal is stable, press the <Space> bar. You will now be recording from **T5 and T6.**

17) **When the final 1-minute recording is complete, the program will stop**. Click the "Close" button.

18) Click on the title bar of the BSetup main screen and select "Review Screen". Using the "select" button, access the selector popup dialog. Select the latest session for the trainee.

19) Inspect the graphical results. You should see 5 minutes of data (4x4) or 8 minutes of data (2x2) presented, in 1-minute intervals. Use the "settings" pushbutton to access the popup dialog to change settings to view all the data if necessary.

20) Press the "Quick File" button on the top of the BReview screen. This will automatically load the data into Excel, and you should see the data in the Excel spreadsheet, with a separate row for each minute. There will be data for both the digital filter, and the FFT results (FFT data has an "F" after the variable name), along with asymmetries, coherences, and ratios.

21) The results may now be analyzed by using macros or other appropriate methods. The EEG data files can be read into NeuroGuide, and can be found in the directory c:\brainm.20\studies\[studyid] where "[studyid]" is the name you have assigned to the trainee/study folder. Contact BrainMaster to get referrals of qualified individuals or practices who can help to interpret the results.

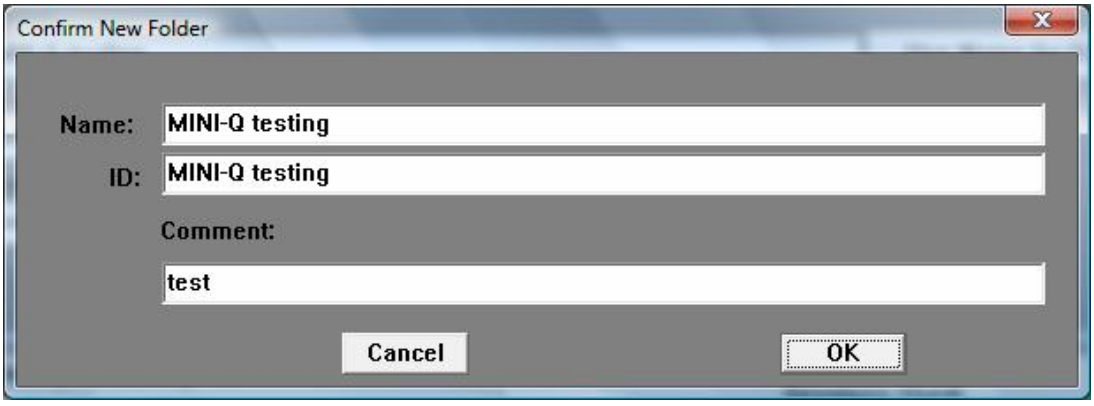
Detailed Procedure for 2-channel 9-position MINI-Q using MINI-Q 2 (total of 18 channels)

The following procedure will acquire 18 channels of EEG in 9 passes, using a 2-channel BrainMaster Atlantis device. If each pass is 1 minute, then 18 channels can be acquired in 9 minutes. It is possible, using NeuroGuide, to produce color topographic and connectivity maps of the whole head.

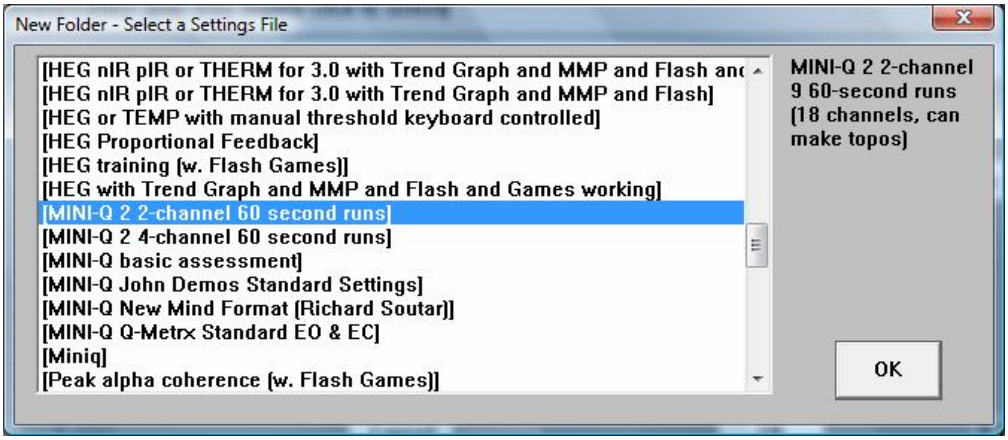
It can also be used with a 4-channel Atlantis, but only acquiring 2 channels at a time. With the 4-channel Atlantis, there is a separate procedure that should be used, that can acquire 20 channels in 5 passes.

Create a new folder using an appropriate trainee/study name and ID. For initial testing, create a folder called "MINI-Q testing". Press "Folder Selection" then "Create a new Folder" then enter into the popup control:

Press OK". Then you will see the confirm dialog box".

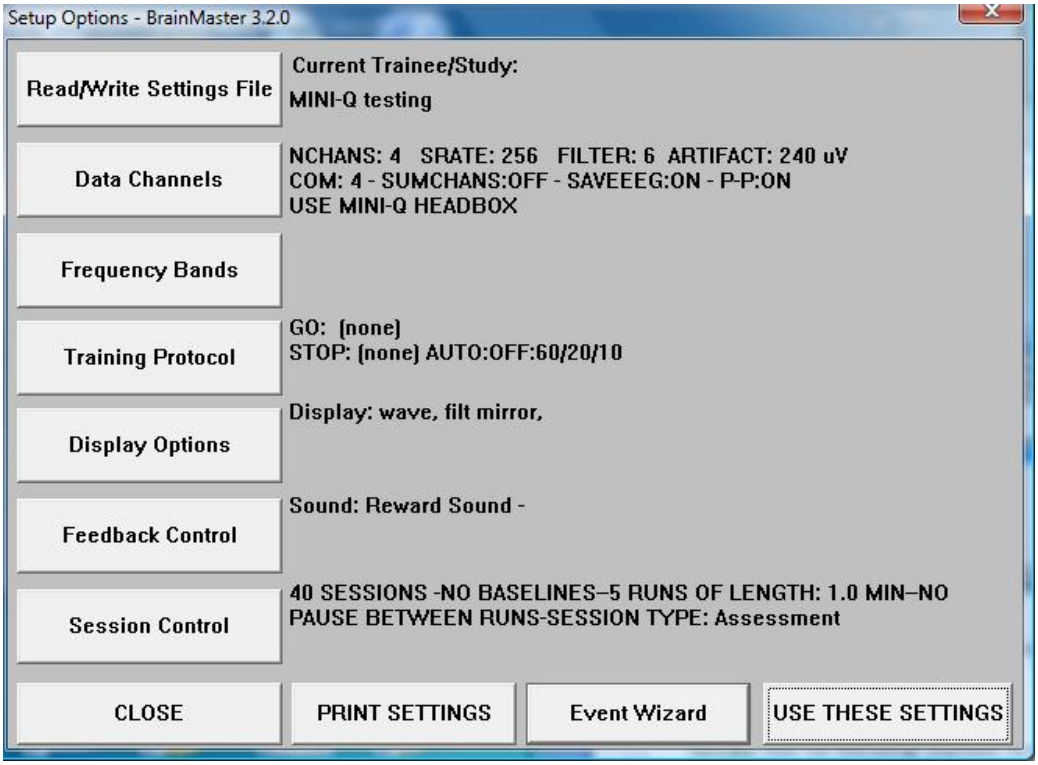


Press "OK". Then Select the settings file: "MINI-Q 2 2-channel 60 second runs"



First highlight "Use These Settings"MINI-Q 2 2-channel 60 second runs"

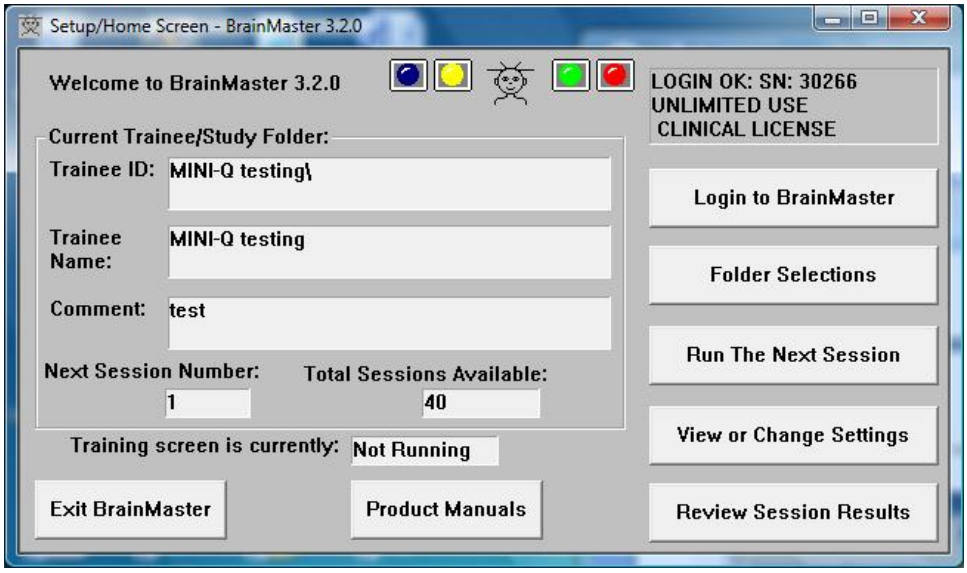
Then press OK You will see the Setup Options screen:



(important): Press "Use These Settings" immediately. Do not make any settings changes until you have first done so.

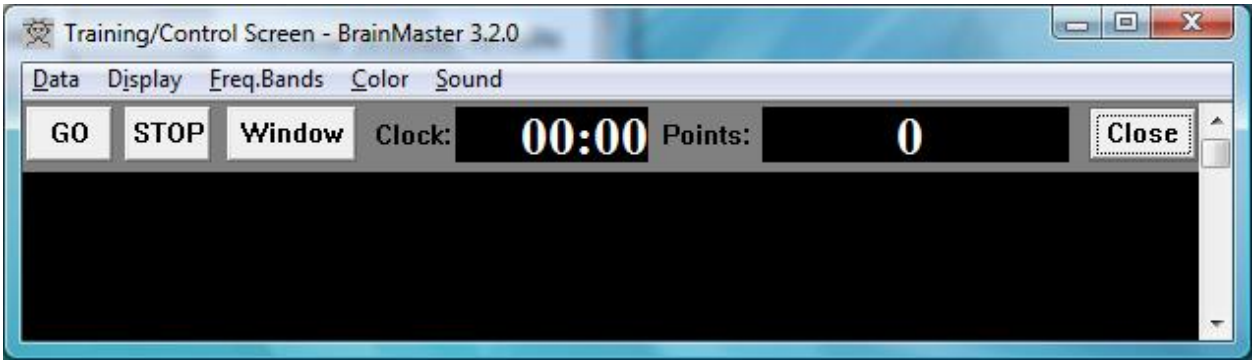
You will then see the Setup/Control Home Screen:

You will then see the Setup/Control Home Screen:



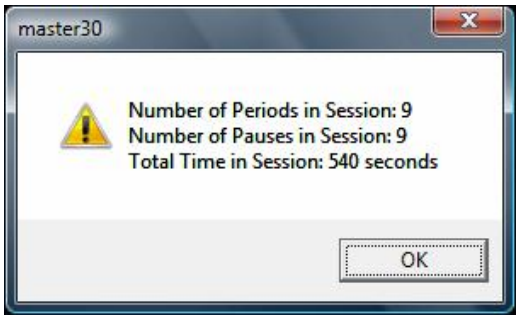
If you do not see the folder "MINI-Q testing" selected in the above screen, then first "Exit BrainMaster" then start the software again. (This is a windows Vista issue.)

Press "Run the Next Session". You should see the training screen (like below, only larger)



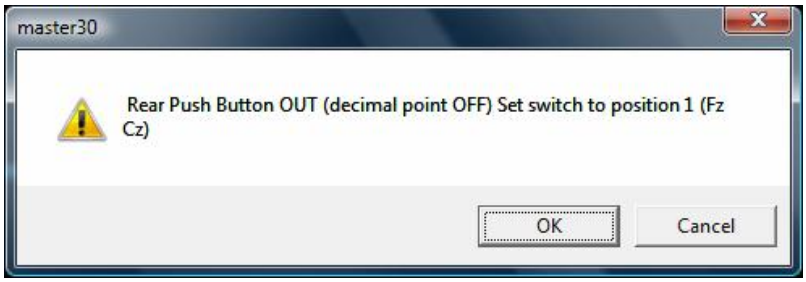
Press "GO"

You will see the following prompt:



Confirm that this information is correct, then press "OK" or <space bar>

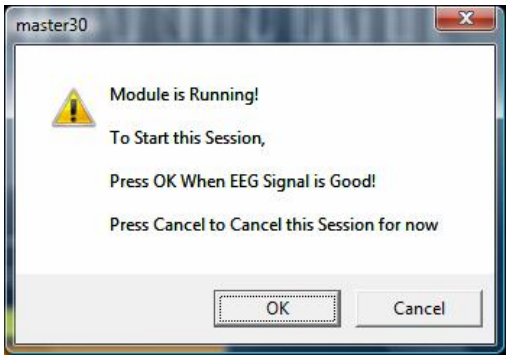
You will then see the following prompt:



Ensure that the rear push button is out, and that the decimal point on the front LED display is OFF. Ensure that the front panel display shows the number "1". Rotate the switch counterclockwise if necessary until the display reads "1".

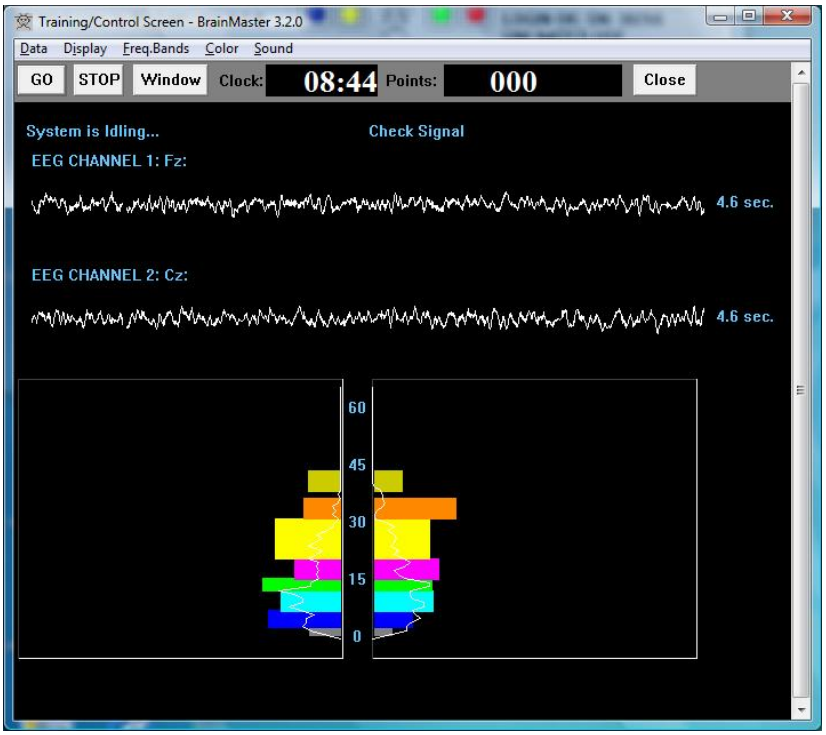
Press "OK" or <space bar>

If your device is operating and properly logged in, after a few moments, you should see the following prompt, along with EEG data scrolling across the screen:

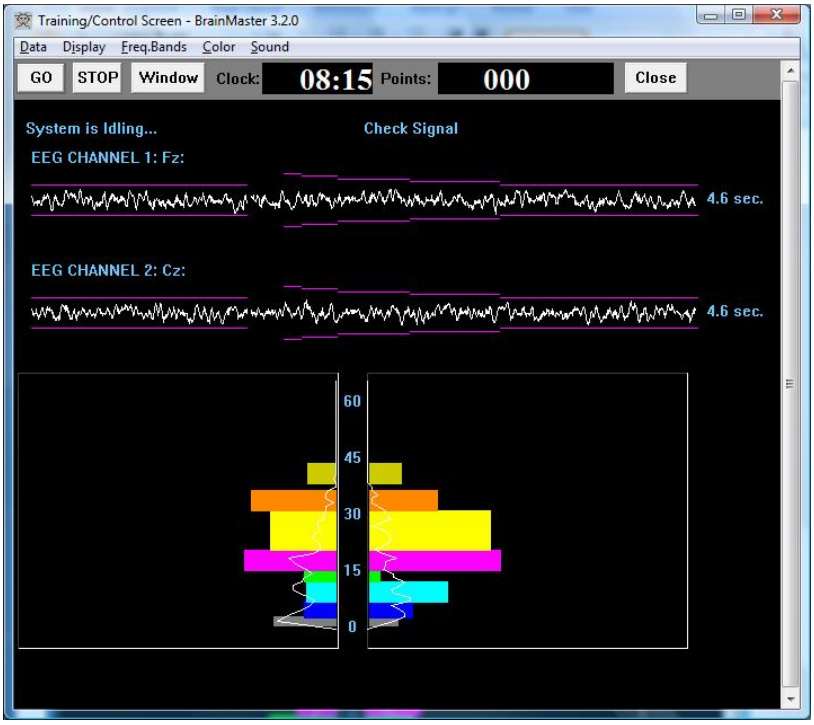


Ensure that the EEG looks good. Rotate the switch through all positions, and ensure that EEG is clean on all positions.

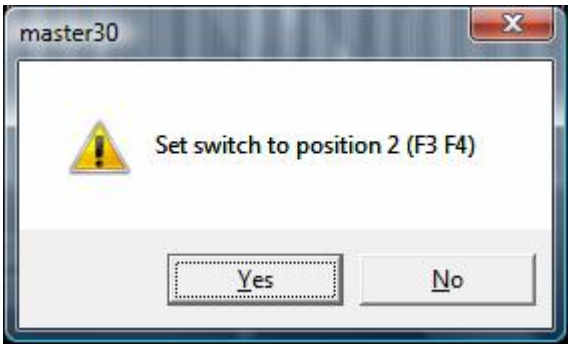
Press "OK" or <space bar>.



You will then see 1 minute of EEG go across the screen. Watch the trace to ensure that clean data are acquired. If you need to reduce the artifact threshold to capture movement or eye artifact, you may press the "r" key until the lines of the proper spacing appear. To increase the artifact threshold, use the "R" key.



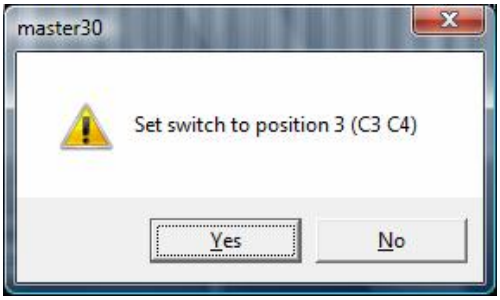
After 1 minute of EEG has been acquired, you will see the following prompt:



After another minute of EEG, you will see the following prompt.

Set the switch to position 2, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

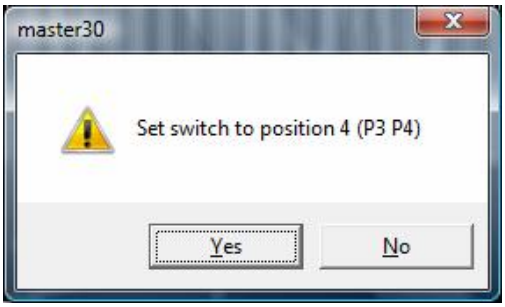


After another minute of EEG, you will see the following prompt.

Set the switch to position 3, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

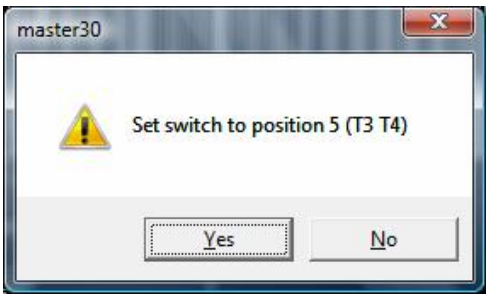
After another minute of EEG, you will see the following prompt.



Set the switch to position 4, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

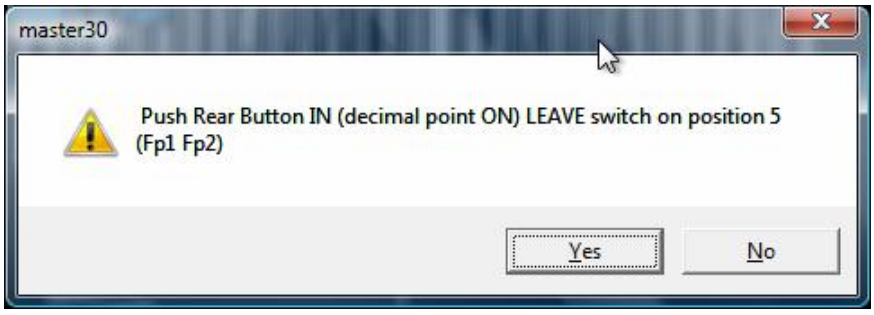
After another minute of EEG, you will see the following prompt.



Set the switch to position 5, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.

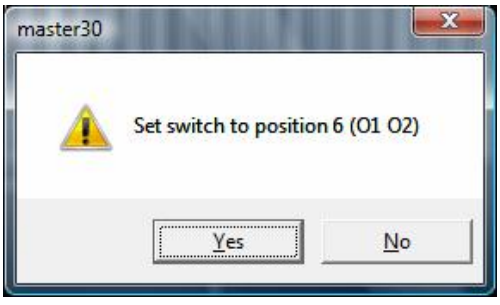


Now PUSH THE REAR BUTTON IN so that the decimal point goes ON.

Do NOT change the switch position at this time.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.

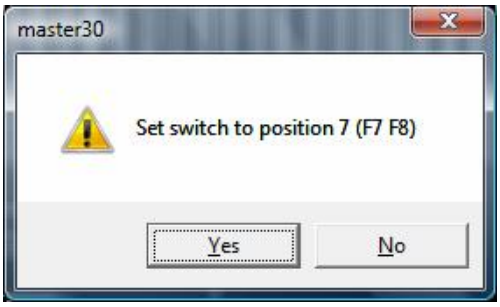


Now rotate the switch to position 6 and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Note that you do not change the position of the rear pushbutton.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.



Set the switch to position 7, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.

Set the switch to position 8, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

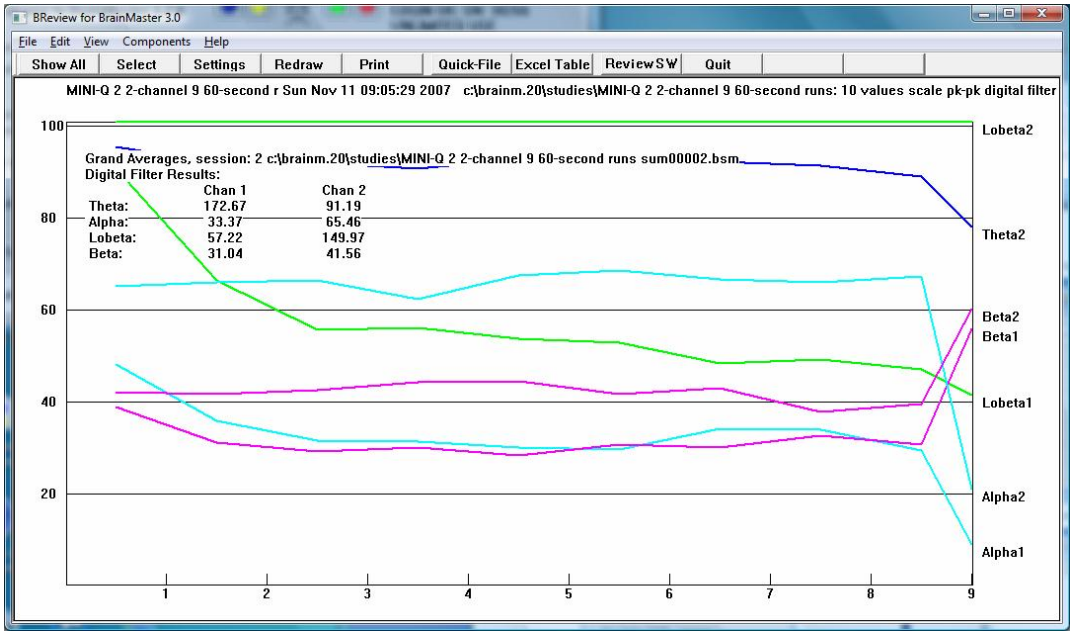
After another minute of EEG, the system will stop.

Press "Close" and "OK".

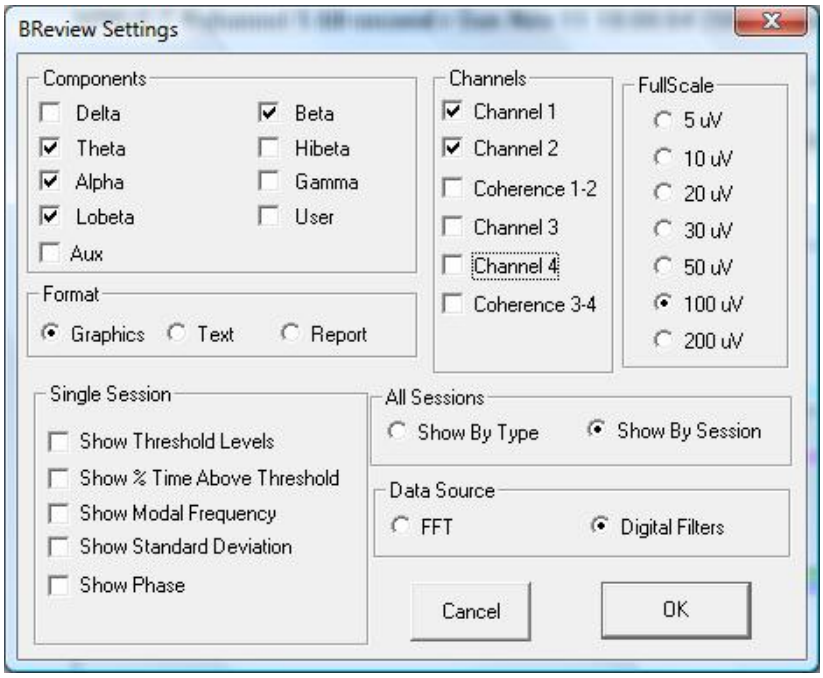
You will return to the Setup/Control Home Screen.

Reviewing 2-channel data:

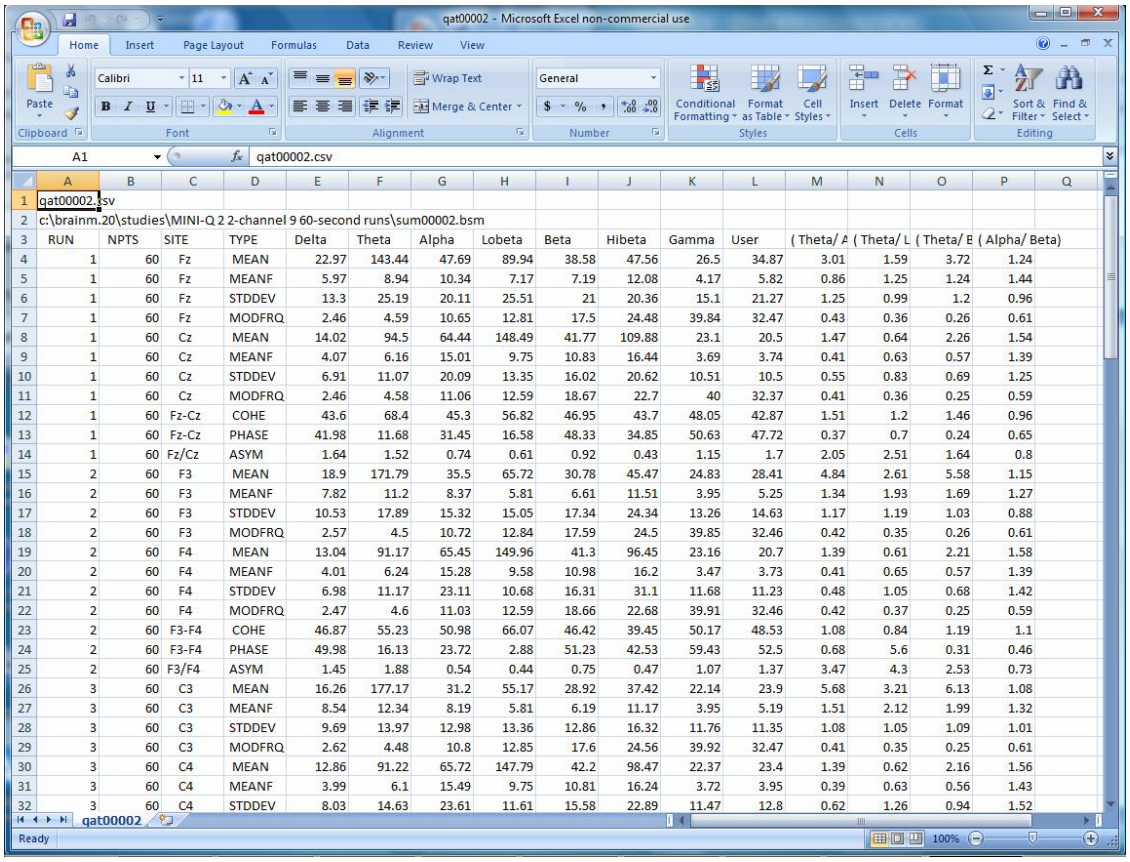
To review data, from the Setup/Control Home screen, press "Review Session Results". You will see the Review Screen:



You may change the display settings as necessary to see the components you want:



If you press "Quick File," you will see the following spreadsheet:



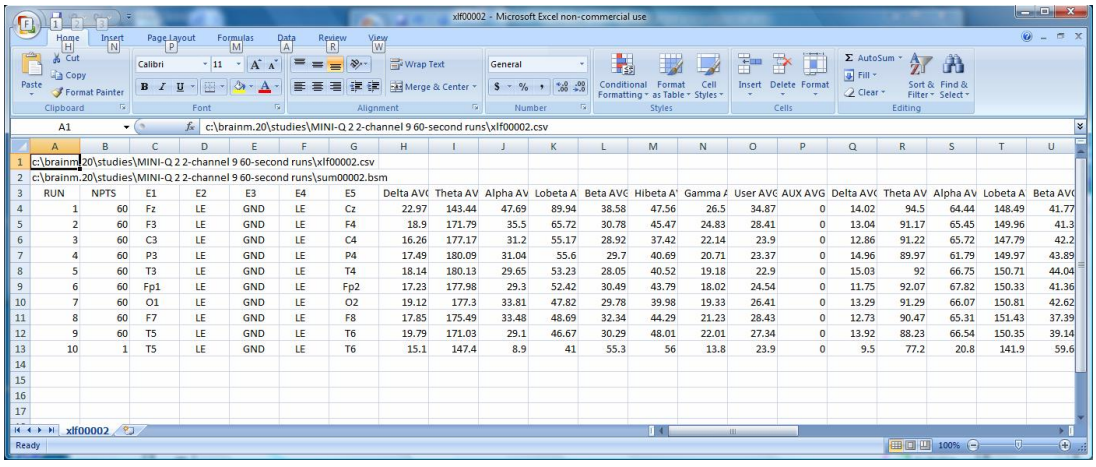
qat00002 - Microsoft Excel non-commercial use

qat00002.csv

c:\brainm.20\studies\MINI-Q 2 2-channel 9 60-second runs\sum00002.bsm

RUN	NPTS	SITE	TYPE	Delta	Theta	Alpha	Lobeta	Beta	Hibeta	Gamma	User	(Theta/ A	(Theta/ L	(Theta/ B	(Alpha/ Beta)
1	60	Fz	MEAN	22.97	143.44	47.69	89.94	38.58	47.56	26.5	34.87	3.01	1.59	3.72	1.24
1	60	Fz	MEANF	5.97	8.94	10.34	7.17	7.19	12.08	4.17	5.82	0.86	1.25	1.24	1.44
1	60	Fz	STDDEV	13.3	25.19	20.11	25.51	21	20.36	15.1	21.27	1.25	0.99	1.2	0.96
1	60	Fz	MODFRQ	2.46	4.59	10.65	12.81	17.5	24.48	39.84	32.47	0.43	0.36	0.26	0.61
1	60	Cz	MEAN	14.02	94.5	64.44	148.49	41.77	109.88	23.1	20.5	1.47	0.64	2.26	1.54
1	60	Cz	MEANF	4.07	6.16	15.01	9.75	10.83	16.44	3.69	3.74	0.41	0.63	0.57	1.39
1	60	Cz	STDDEV	6.91	11.07	20.09	13.35	16.02	20.62	10.51	10.5	0.55	0.83	0.69	1.25
1	60	Cz	MODFRQ	2.46	4.58	11.06	12.59	18.67	22.7	40	32.37	0.41	0.36	0.25	0.59
1	60	Fz-Cz	COHE	43.6	68.4	45.3	56.82	46.95	43.7	48.05	42.87	1.51	1.2	1.46	0.96
1	60	Fz-Cz	PHASE	41.98	11.68	31.45	16.58	48.33	34.85	50.63	47.72	0.37	0.7	0.24	0.65
1	60	Fz/Cz	ASYM	1.64	1.52	0.74	0.61	0.92	0.43	1.15	1.7	2.05	2.51	1.64	0.8
2	60	F3	MEAN	18.9	171.79	35.5	65.72	30.78	45.47	24.83	28.41	4.84	2.61	5.58	1.15
2	60	F3	MEANF	7.82	11.2	8.37	5.81	6.61	11.51	3.95	5.25	1.34	1.93	1.69	1.27
2	60	F3	STDDEV	10.53	17.89	15.32	15.05	17.34	24.34	13.26	14.63	1.17	1.19	1.03	0.88
2	60	F3	MODFRQ	2.57	4.5	10.72	12.84	17.59	24.5	39.85	32.46	0.42	0.35	0.26	0.61
2	60	F4	MEAN	13.04	91.17	65.45	149.96	41.3	96.45	23.16	20.7	1.39	0.61	2.21	1.58
2	60	F4	MEANF	4.01	6.24	15.28	9.58	10.98	16.2	3.47	3.73	0.41	0.65	0.57	1.39
2	60	F4	STDDEV	6.98	11.17	23.11	10.68	16.31	31.1	11.68	11.23	0.48	1.05	0.68	1.42
2	60	F4	MODFRQ	2.47	4.6	11.03	12.59	18.66	22.68	39.91	32.46	0.42	0.37	0.25	0.59
2	60	F3-F4	COHE	46.87	55.23	50.98	66.07	46.42	39.45	50.17	48.53	1.08	0.84	1.19	1.1
2	60	F3-F4	PHASE	49.98	16.13	23.72	2.88	51.23	42.53	59.43	52.5	0.68	5.6	0.31	0.46
2	60	F3/F4	ASYM	1.45	1.88	0.54	0.44	0.75	0.47	1.07	1.37	3.47	4.3	2.53	0.73
3	60	C3	MEAN	16.26	177.17	31.2	55.17	28.92	37.42	22.14	23.9	5.68	3.21	6.13	1.08
3	60	C3	MEANF	8.54	12.34	8.19	5.81	6.19	11.17	3.95	5.19	1.51	2.12	1.99	1.32
3	60	C3	STDDEV	9.69	13.97	12.98	13.36	12.86	16.32	11.76	11.35	1.08	1.05	1.09	1.01
3	60	C3	MODFRQ	2.62	4.48	10.8	12.85	17.6	24.56	39.92	32.47	0.41	0.35	0.25	0.61
3	60	C4	MEAN	12.86	91.22	65.72	147.79	42.2	98.47	22.37	23.4	1.39	0.62	2.16	1.56
3	60	C4	MEANF	3.99	6.1	15.49	9.75	10.81	16.24	3.72	3.95	0.39	0.63	0.56	1.43
3	60	C4	STDDEV	8.03	14.63	23.61	11.61	15.58	22.89	11.47	12.8	0.62	1.26	0.94	1.52

If you press ?Excel Table", you will get the following table:



xlf00002 - Microsoft Excel non-commercial use

c:\brainm.20\studies\MINI-Q 2 2-channel 9 60-second runs\xlf00002.csv

c:\brainm.20\studies\MINI-Q 2 2-channel 9 60-second runs\sum00002.bsm

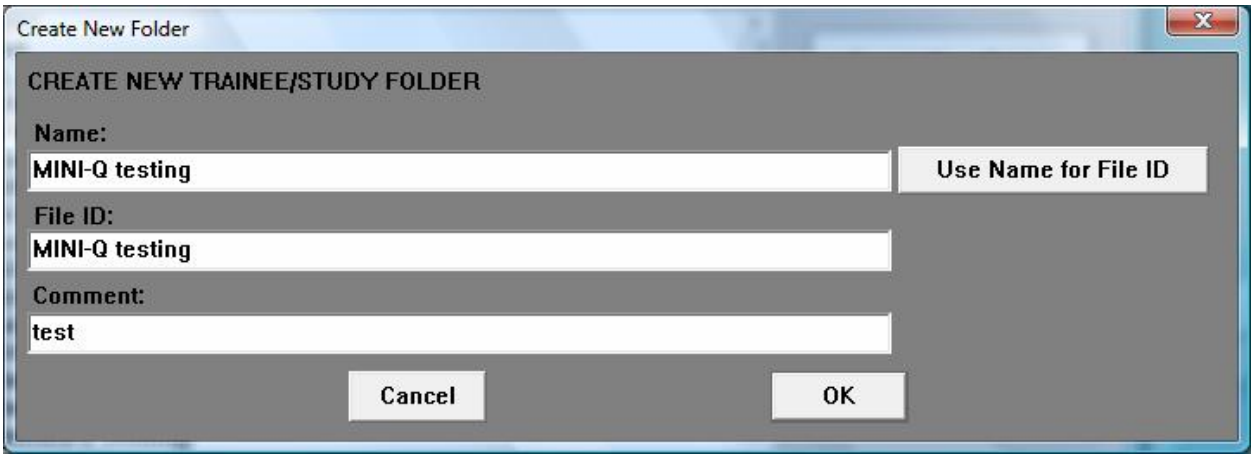
RUN	NPTS	E1	E2	E3	E4	E5	Delta AVG	Theta AV	Alpha AV	Lobeta A	Beta AVG	Hibeta A'	Gamma A	User AVG	AUX AVG	Delta AVG	Theta AV	Alpha AV	Lobeta A	Beta AVG
1	60	Fz	LE	GND	LE	Cz	22.97	143.44	47.69	89.94	38.58	47.56	26.5	34.87	0	14.02	94.5	64.44	148.49	41.77
2	60	F3	LE	GND	LE	F4	18.9	171.79	35.5	65.72	30.78	45.47	24.83	28.41	0	13.04	91.17	65.45	149.96	41.3
3	60	C3	LE	GND	LE	C4	16.26	177.17	31.2	55.17	28.92	37.42	22.14	23.9	0	12.86	91.22	65.72	147.79	42.2
4	60	P3	LE	GND	LE	P4	17.49	180.09	31.04	55.6	29.7	40.69	20.71	23.37	0	14.96	89.97	61.79	149.97	43.89
5	60	T3	LE	GND	LE	T4	18.14	180.13	29.65	53.23	28.05	40.52	19.18	22.9	0	15.03	92	66.75	150.71	44.04
6	60	Fp1	LE	GND	LE	Fp2	17.23	177.98	29.3	52.42	30.49	43.79	18.02	24.54	0	11.75	92.07	67.82	150.33	41.36
7	60	O1	LE	GND	LE	O2	19.12	177.3	33.81	47.82	29.78	39.98	19.33	26.41	0	13.29	91.29	66.07	150.81	42.62
8	60	F7	LE	GND	LE	F8	17.85	175.49	33.48	48.69	32.34	44.29	21.23	28.43	0	12.73	90.47	65.31	151.43	37.39
9	60	T5	LE	GND	LE	T6	19.79	171.03	29.1	46.67	30.29	48.01	22.01	27.34	0	13.92	88.23	66.54	150.35	39.14
10	1	T5	LE	GND	LE	T6	15.1	147.4	8.9	41	55.3	56	13.8	23.9	0	9.5	77.2	20.8	141.9	59.6

To import data into NeuroGuide, use the standard NeuroGuide procedure, and access the files from the directory which will be found in c:\brainm.20\studies[studyid] where [studyid] is the name that you have used for the trainee/study ID.

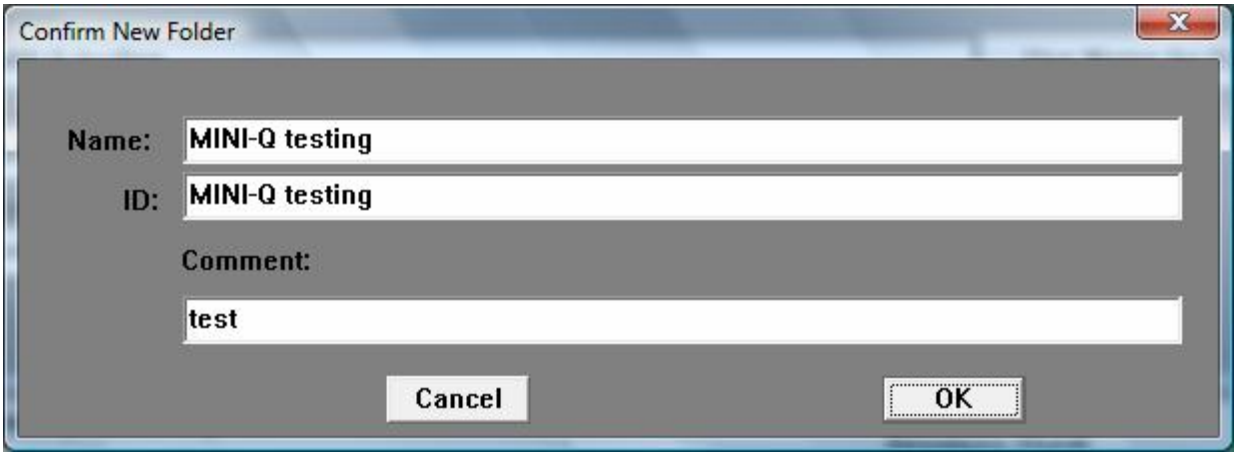
Detailed Procedure for 4-channel 5-position MINI-Q using MINI-Q 2 (total of 20 channels)

The following procedure will acquire 20 channels of EEG in 5 passes, using a 4-channel BrainMaster Atlantis device. If each pass is 1 minute, then 20 channels can be acquired in 5 minutes. It is possible, using NeuroGuide, to produce color topographic and connectivity maps of the whole head.

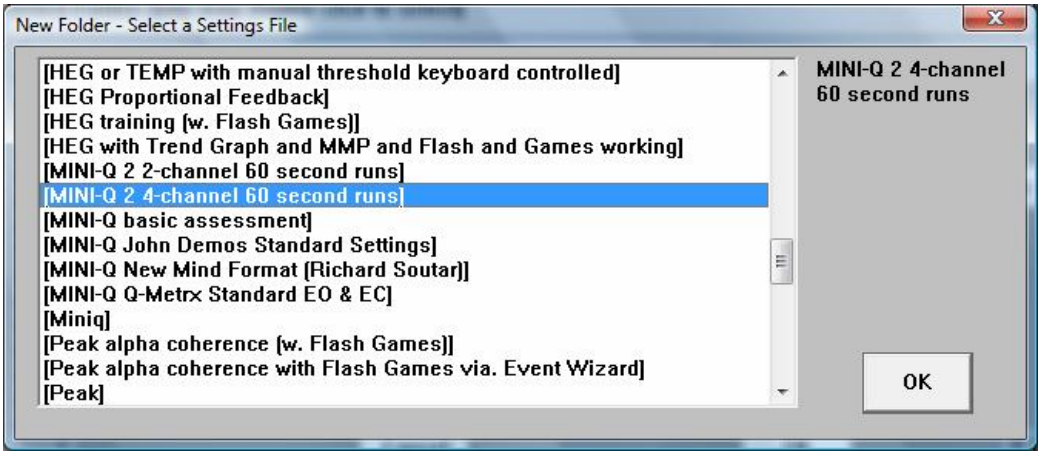
Create a new folder. For initial testing, create a folder called "MINI-Q testing". Press "Folder Selection" then "Create a new Folder" then enter into the popup control:



Press OK". Then press "OK on the confirm dialog box".

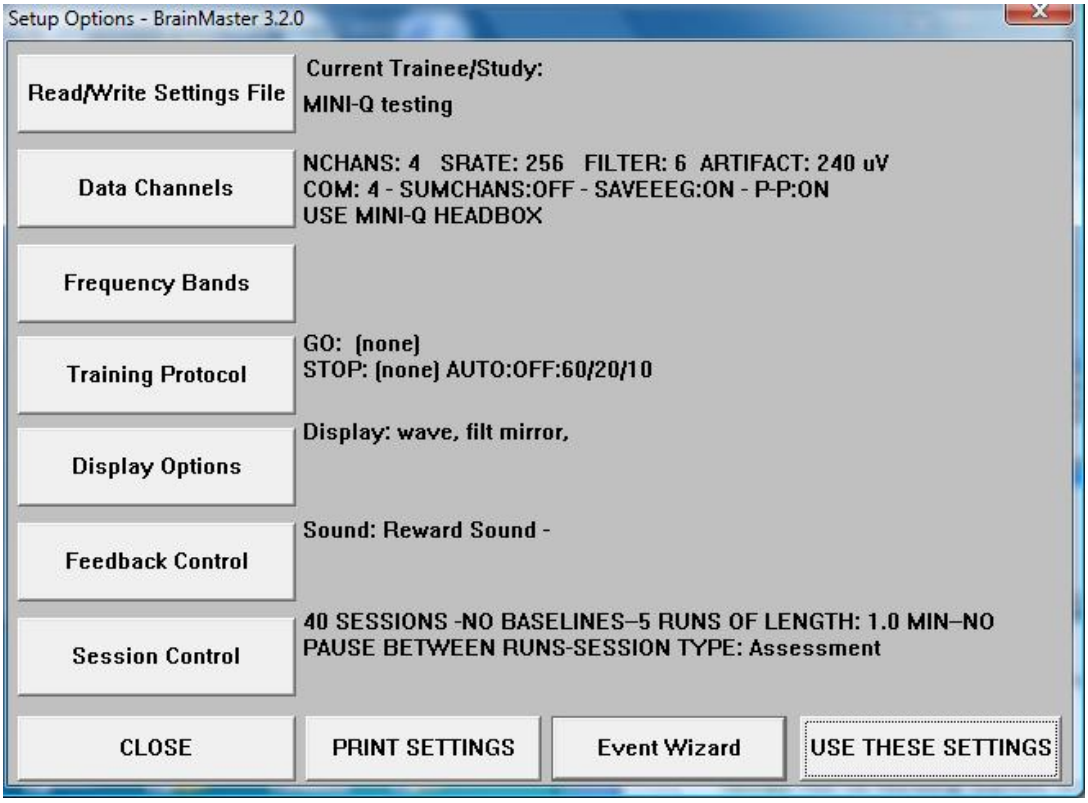


Press "OK". Then select the settings file: "MINI-Q 2 4-channel 60 second runs"



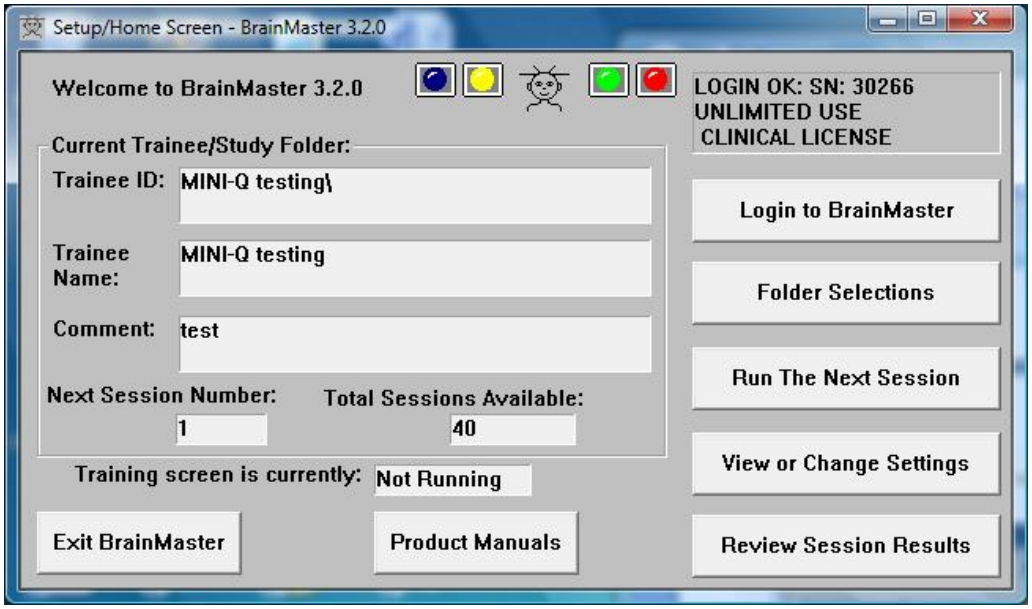
First highlight "Use These Settings"MINI-Q 2 4-channel 60 second runs"

Then press OK



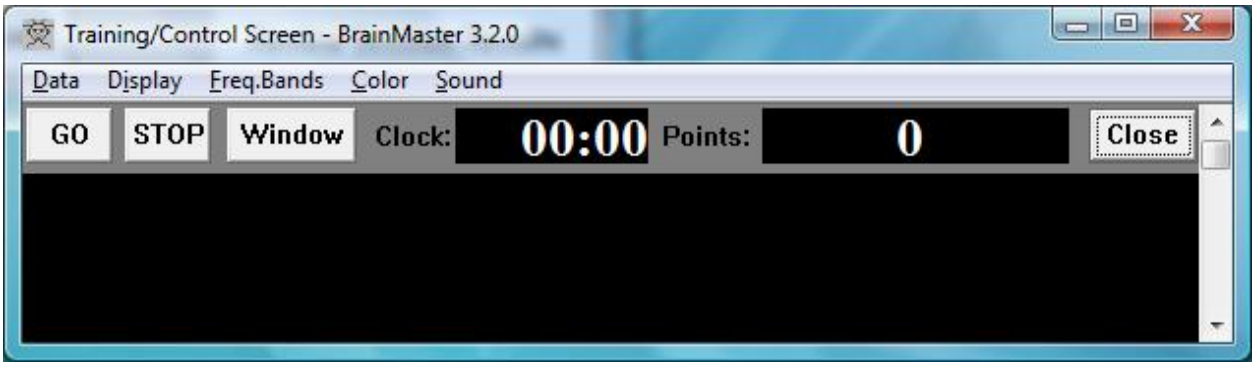
(important): Press "Use These Settings" immediately. Do not make any settings changes until you have first done so.

You will then see the Setup/Control Home Screen:



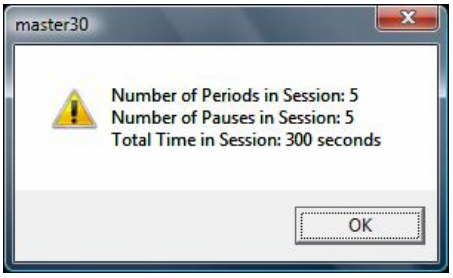
If you do not see the folder "MINI-Q testing" selected in the above screen, then first "Exit BrainMaster" then start the software again.

Press "Run the Next Session". You should see the training screen (like below, only larger)



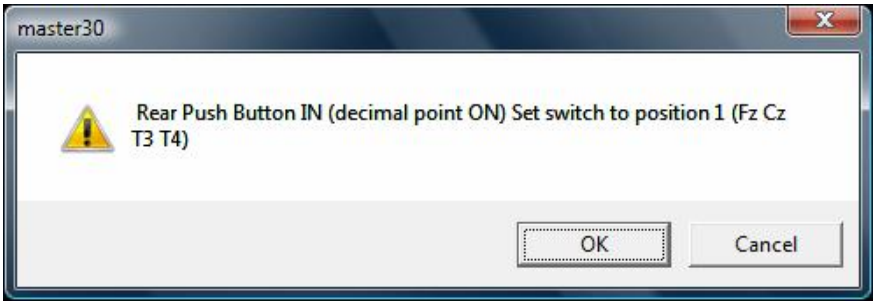
Press "GO"

You will see the following prompt:



Confirm that this information is correct, then press "OK" or <space bar>

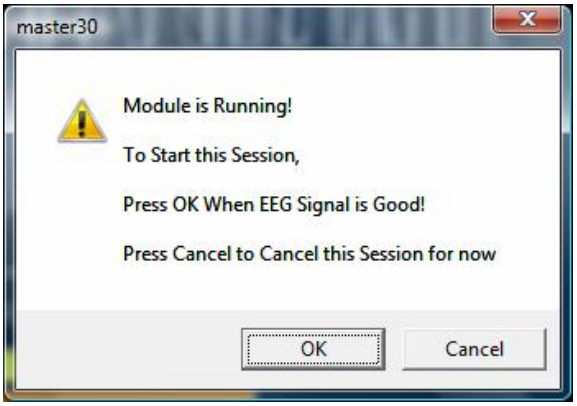
You will then see the following prompt:



Ensure that the rear push button is out, and that the decimal point on the front LED display is ON. Ensure that the front panel display shows the number "1". Rotate the switch counterclockwise if necessary until the display reads "1".

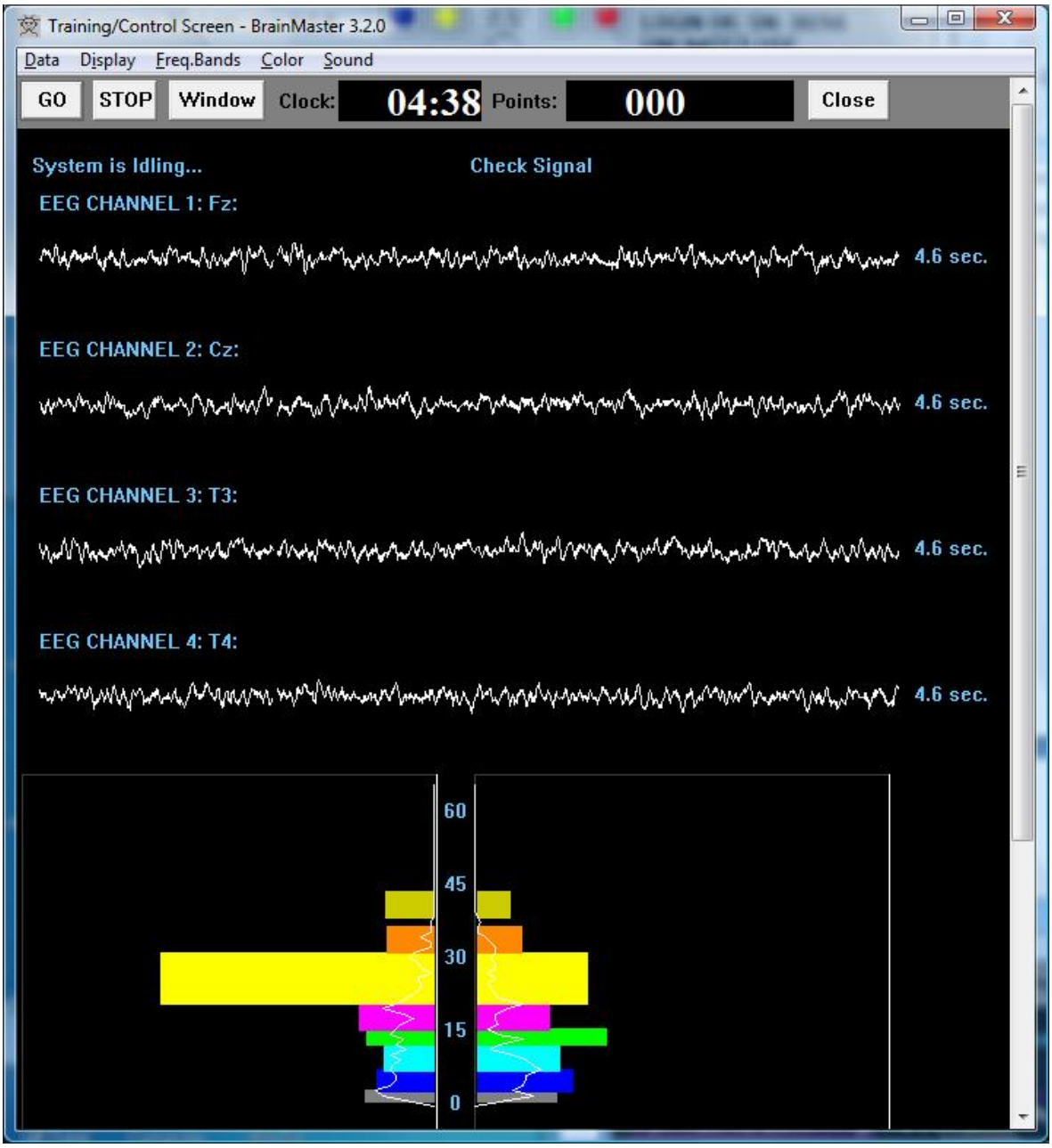
Press "OK" or <space bar>

If your device is operating and properly logged in, after a few moments, you should see the following prompt, along with EEG data scrolling across the screen:

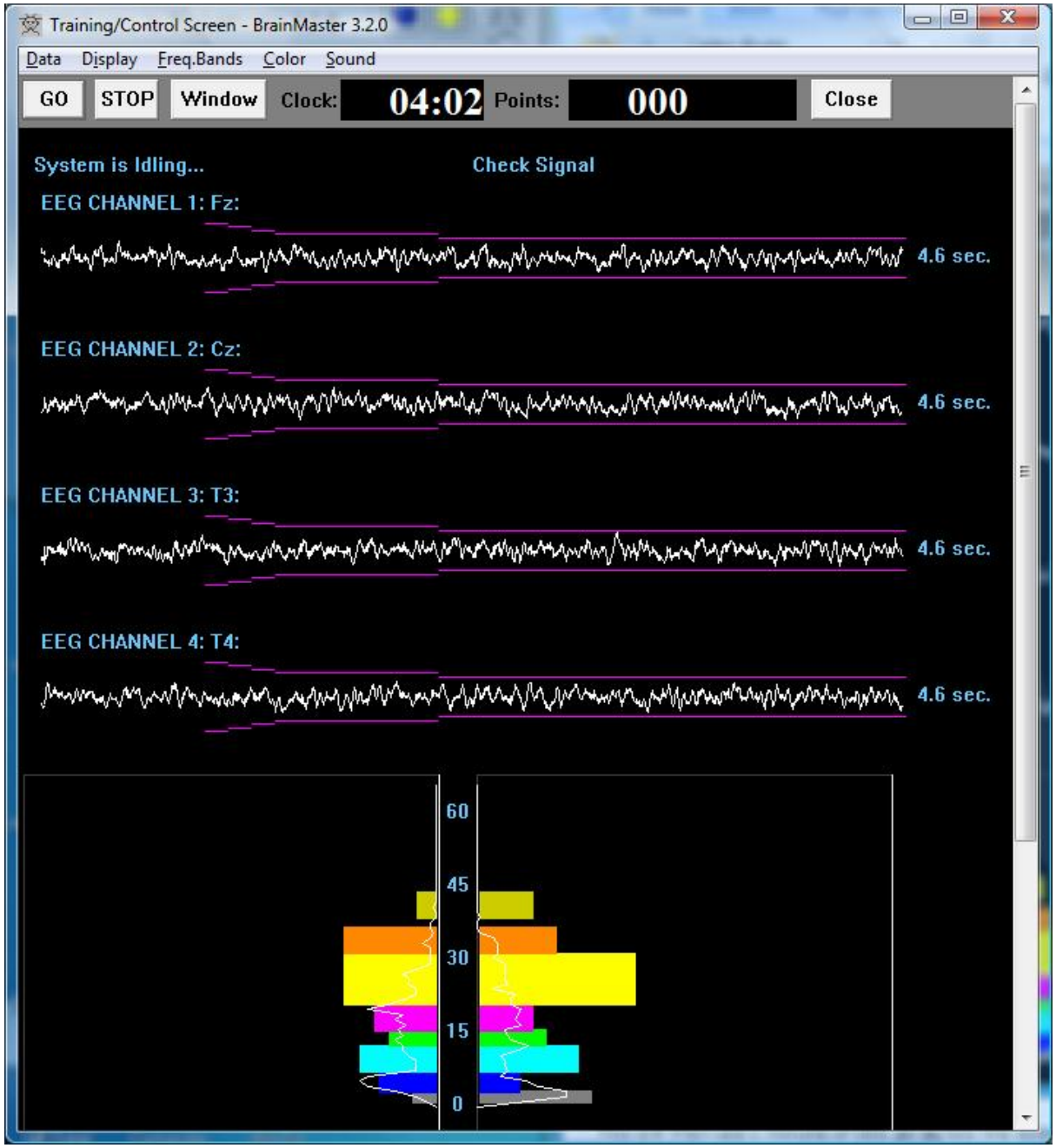


Ensure that the EEG looks good. Rotate the switch through all positions, and ensure that EEG is clean on all positions.

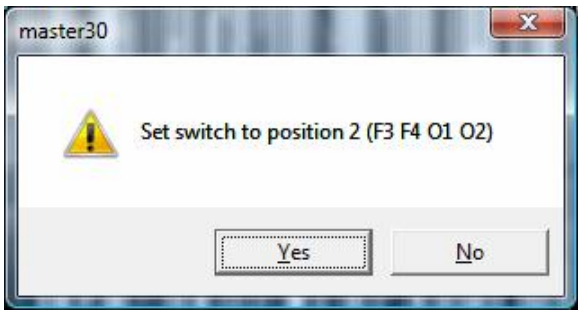
Press "OK" or <space bar>.



You will then see 1 minute of EEG go across the screen. Watch the trace to ensure that clean data are acquired. If you need to reduce the artifact threshold to capture movement or eye artifact, you may press the "r" key until the lines of the proper spacing appear. To increase the artifact threshold, use the "R" key.


Training/Control Screen - BrainMaster 3.2.0
Data Display Freq.Bands Color Sound
GO
STOP
Window
Clock:
04:02
Points:
000
Close
System is Idling...
Check Signal
EEG CHANNEL 1: Fz:
4.6 sec.
EEG CHANNEL 2: Cz:
4.6 sec.
EEG CHANNEL 3: T3:
4.6 sec.
EEG CHANNEL 4: T4:
4.6 sec.
60
45
30
15
0

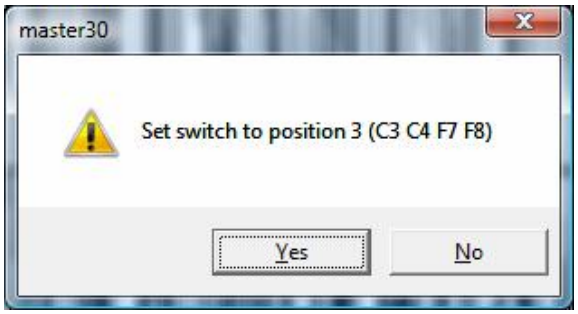
After 1 minute of EEG has been acquired, you will see the following prompt:



Set the switch to position 2, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.

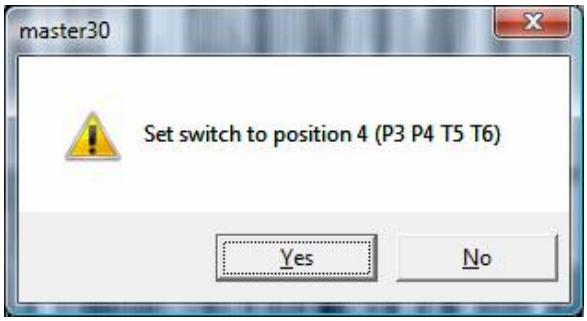


After another minute of EEG, you will see the following prompt.

Set the switch to position 3, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

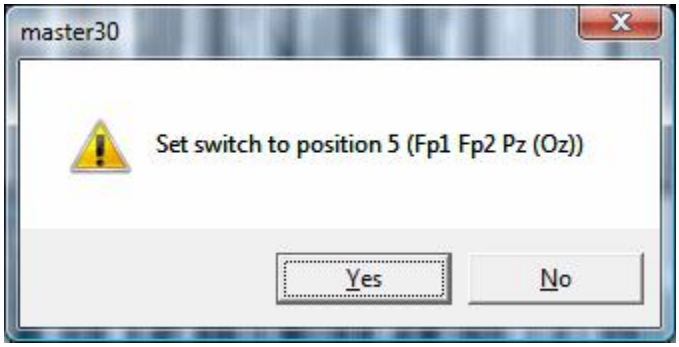
After another minute of EEG, you will see the following prompt.



Set the switch to position 4, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

After another minute of EEG, you will see the following prompt.



Set the switch to position 5, and wait until the EEG signal looks clean. This should take no more than 5-10 seconds.

Press "Yes" or <space bar>.

After another minute of EEG, the system will stop.

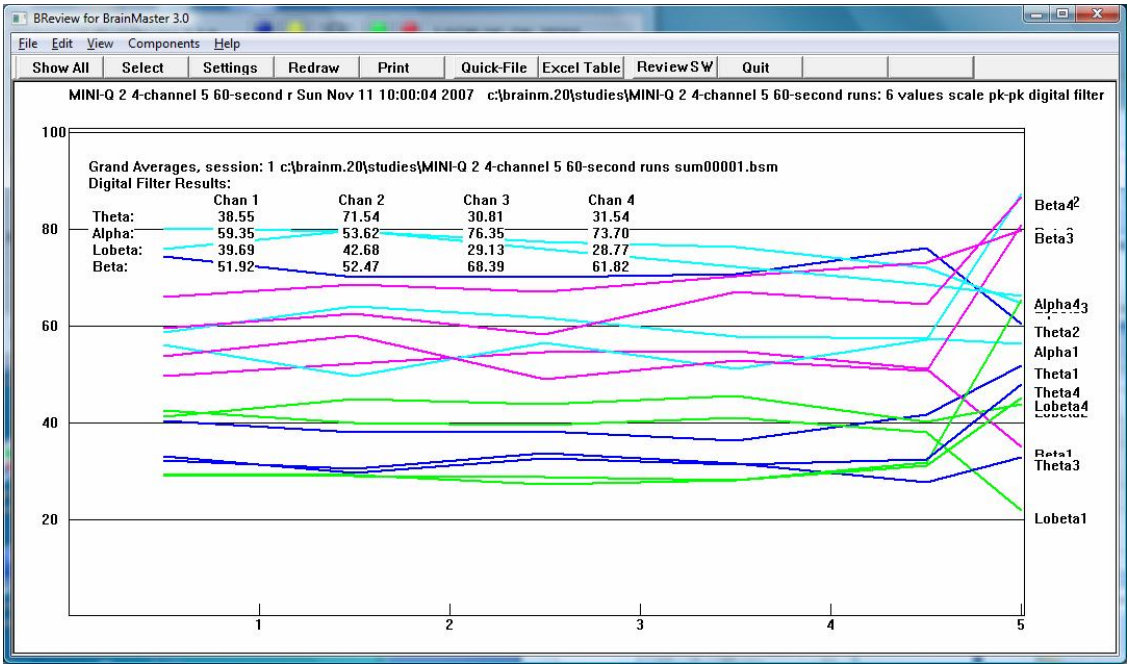
Press "Close" and "OK"

You will return to the Setup/Control Home Screen.

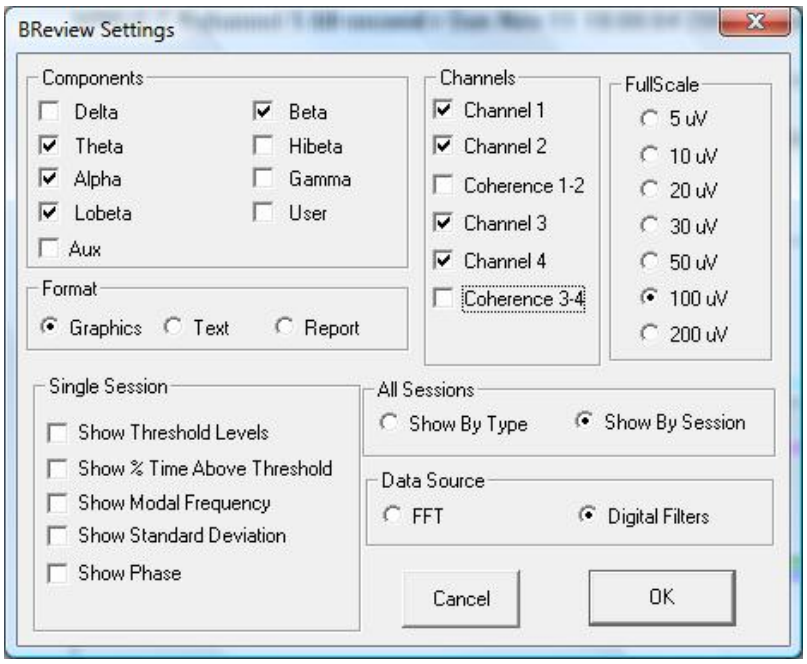
Reviewing 4-channel data:

press "Review Session Results".

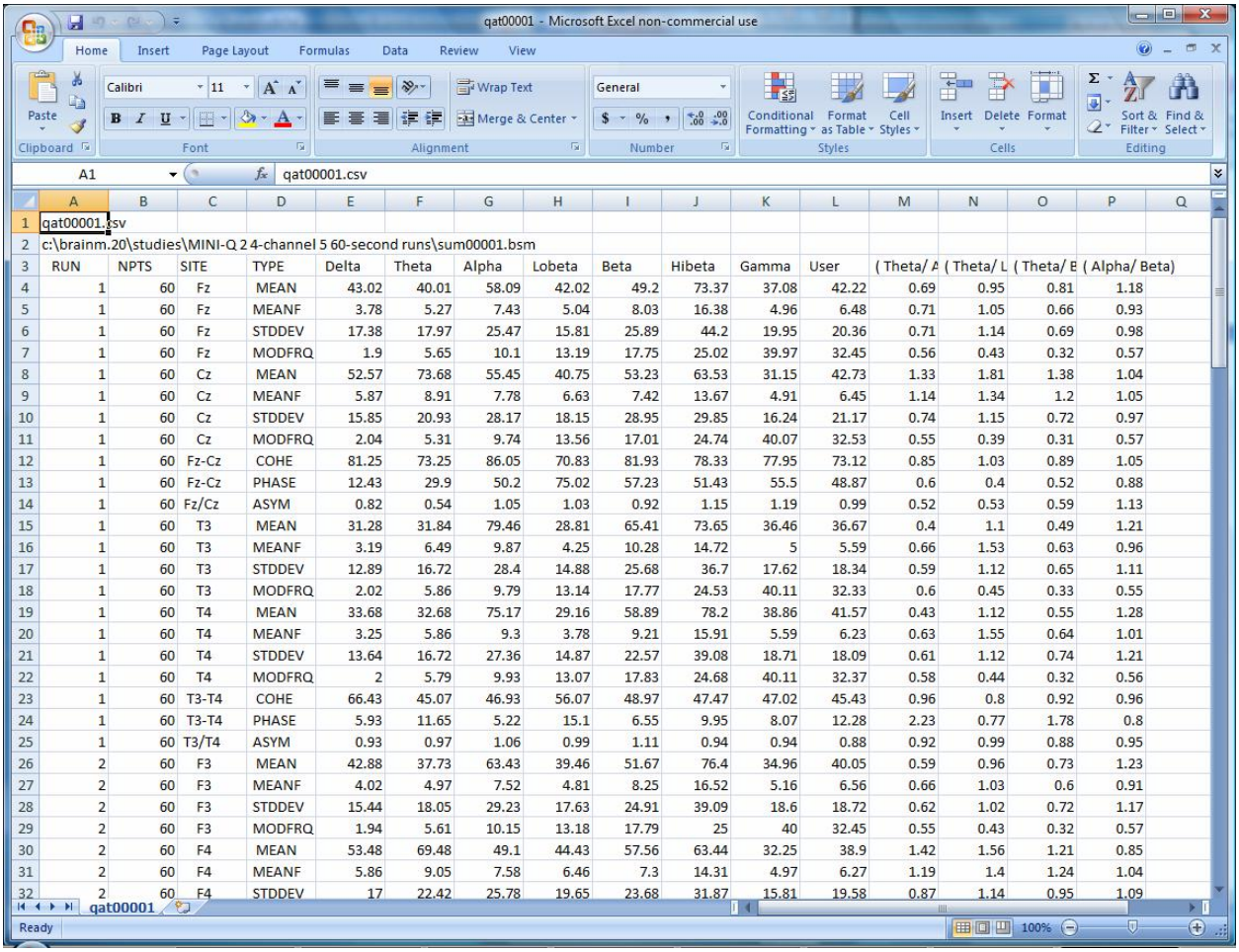
You should see 5 minutes of data. Use "Settings" and change "Full Scale" or other options as needed:



You may change the display settings as necessary to see the components you want:



Press "Quick File" to get the Quick File:

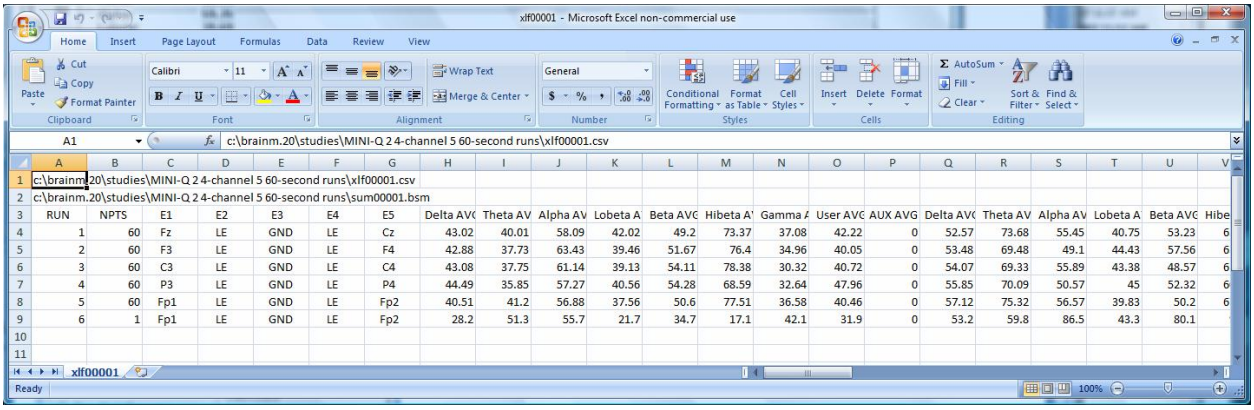


qat00001 - Microsoft Excel non-commercial use

A1: qat00001.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	qat00001.csv																
2	c:\brainm.20\studies\MINI-Q 2 4-channel 5 60-second runs\sum00001.bsm																
3	RUN	NPTS	SITE	TYPE	Delta	Theta	Alpha	Lobeta	Beta	Hibeta	Gamma	User	(Theta/ A	(Theta/ L	(Theta/ B	(Alpha/ Beta)	
4	1	60	Fz	MEAN	43.02	40.01	58.09	42.02	49.2	73.37	37.08	42.22	0.69	0.95	0.81	1.18	
5	1	60	Fz	MEANF	3.78	5.27	7.43	5.04	8.03	16.38	4.96	6.48	0.71	1.05	0.66	0.93	
6	1	60	Fz	STDDEV	17.38	17.97	25.47	15.81	25.89	44.2	19.95	20.36	0.71	1.14	0.69	0.98	
7	1	60	Fz	MODFRQ	1.9	5.65	10.1	13.19	17.75	25.02	39.97	32.45	0.56	0.43	0.32	0.57	
8	1	60	Cz	MEAN	52.57	73.68	55.45	40.75	53.23	63.53	31.15	42.73	1.33	1.81	1.38	1.04	
9	1	60	Cz	MEANF	5.87	8.91	7.78	6.63	7.42	13.67	4.91	6.45	1.14	1.34	1.2	1.05	
10	1	60	Cz	STDDEV	15.85	20.93	28.17	18.15	28.95	29.85	16.24	21.17	0.74	1.15	0.72	0.97	
11	1	60	Cz	MODFRQ	2.04	5.31	9.74	13.56	17.01	24.74	40.07	32.53	0.55	0.39	0.31	0.57	
12	1	60	Fz-Cz	COHE	81.25	73.25	86.05	70.83	81.93	78.33	77.95	73.12	0.85	1.03	0.89	1.05	
13	1	60	Fz-Cz	PHASE	12.43	29.9	50.2	75.02	57.23	51.43	55.5	48.87	0.6	0.4	0.52	0.88	
14	1	60	Fz/Cz	ASYM	0.82	0.54	1.05	1.03	0.92	1.15	1.19	0.99	0.52	0.53	0.59	1.13	
15	1	60	T3	MEAN	31.28	31.84	79.46	28.81	65.41	73.65	36.46	36.67	0.4	1.1	0.49	1.21	
16	1	60	T3	MEANF	3.19	6.49	9.87	4.25	10.28	14.72	5	5.59	0.66	1.53	0.63	0.96	
17	1	60	T3	STDDEV	12.89	16.72	28.4	14.88	25.68	36.7	17.62	18.34	0.59	1.12	0.65	1.11	
18	1	60	T3	MODFRQ	2.02	5.86	9.79	13.14	17.77	24.53	40.11	32.33	0.6	0.45	0.33	0.55	
19	1	60	T4	MEAN	33.68	32.68	75.17	29.16	58.89	78.2	38.86	41.57	0.43	1.12	0.55	1.28	
20	1	60	T4	MEANF	3.25	5.86	9.3	3.78	9.21	15.91	5.59	6.23	0.63	1.55	0.64	1.01	
21	1	60	T4	STDDEV	13.64	16.72	27.36	14.87	22.57	39.08	18.71	18.09	0.61	1.12	0.74	1.21	
22	1	60	T4	MODFRQ	2	5.79	9.93	13.07	17.83	24.68	40.11	32.37	0.58	0.44	0.32	0.56	
23	1	60	T3-T4	COHE	66.43	45.07	46.93	56.07	48.97	47.47	47.02	45.43	0.96	0.8	0.92	0.96	
24	1	60	T3-T4	PHASE	5.93	11.65	5.22	15.1	6.55	9.95	8.07	12.28	2.23	0.77	1.78	0.8	
25	1	60	T3/T4	ASYM	0.93	0.97	1.06	0.99	1.11	0.94	0.94	0.88	0.92	0.99	0.88	0.95	
26	2	60	F3	MEAN	42.88	37.73	63.43	39.46	51.67	76.4	34.96	40.05	0.59	0.96	0.73	1.23	
27	2	60	F3	MEANF	4.02	4.97	7.52	4.81	8.25	16.52	5.16	6.56	0.66	1.03	0.6	0.91	
28	2	60	F3	STDDEV	15.44	18.05	29.23	17.63	24.91	39.09	18.6	18.72	0.62	1.02	0.72	1.17	
29	2	60	F3	MODFRQ	1.94	5.61	10.15	13.18	17.79	25	40	32.45	0.55	0.43	0.32	0.57	
30	2	60	F4	MEAN	53.48	69.48	49.1	44.43	57.56	63.44	32.25	38.9	1.42	1.56	1.21	0.85	
31	2	60	F4	MEANF	5.86	9.05	7.58	6.46	7.3	14.31	4.97	6.27	1.19	1.4	1.24	1.04	
32	2	60	F4	STDDEV	17	22.42	25.78	19.65	23.68	31.87	15.81	19.58	0.87	1.14	0.95	1.09	

Press "Excel Table" to get the Excel Table:



xlf00001 - Microsoft Excel non-commercial use

A1: c:\brainm.20\studies\MINI-Q 2 4-channel 5 60-second runs\xlf00001.csv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	c:\brainm.20\studies\MINI-Q 2 4-channel 5 60-second runs\xlf00001.csv																					
2	c:\brainm.20\studies\MINI-Q 2 4-channel 5 60-second runs\sum00001.bsm																					
3	RUN	NPTS	E1	E2	E3	E4	E5	Delta AVG	Theta AV	Alpha AV	Lobeta A	Beta AVG	Hibeta A'	Gamma A	User AVG	AUX AVG	Delta AVG	Theta AV	Alpha AV	Lobeta A	Beta AVG	Hibe
4	1	60	Fz	LE	GND	LE	Cz	43.02	40.01	58.09	42.02	49.2	73.37	37.08	42.22	0	52.57	73.68	55.45	40.75	53.23	6
5	2	60	F3	LE	GND	LE	F4	42.88	37.73	63.43	39.46	51.67	76.4	34.96	40.05	0	53.48	69.48	49.1	44.43	57.56	6
6	3	60	C3	LE	GND	LE	C4	43.08	37.75	61.14	39.13	54.11	78.38	30.32	40.72	0	54.07	69.33	55.89	43.38	48.57	6
7	4	60	P3	LE	GND	LE	P4	44.49	35.85	57.27	40.56	54.28	68.59	32.64	47.96	0	55.85	70.09	50.57	45	52.32	6
8	5	60	Fp1	LE	GND	LE	Fp2	40.51	41.2	56.88	37.56	50.6	77.51	36.58	40.46	0	57.12	75.32	56.57	39.83	50.2	6
9	6	1	Fp1	LE	GND	LE	Fp2	28.2	51.3	55.7	21.7	34.7	17.1	42.1	31.9	0	53.2	59.8	86.5	43.3	80.1	
10																						
11																						

To import data into NeuroGuide, use the standard NeuroGuide procedure, and access the files from the directory which will be found in c:\brainm.20\studies[studyid] where [studyid] is the name that you have used for the trainee/study ID.