Protocol Design Example – downtrain coherence while inhibiting high beta

A request was received for a protocol design that "allows me to down-train coherence, 13-18 (with coherence defined conventionally) AND simultaneously inhibit power at 15-30.

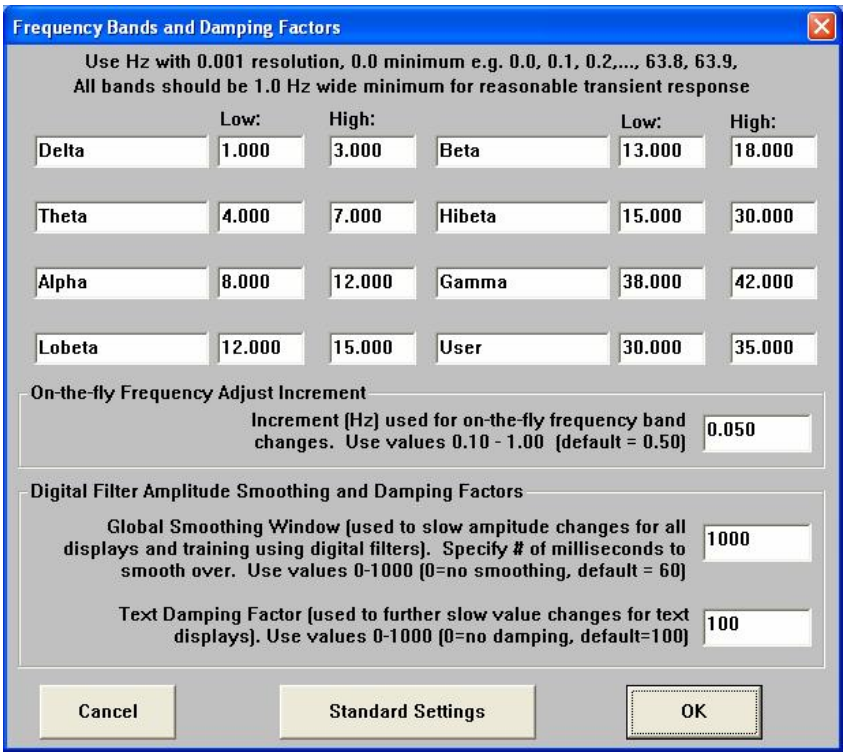
As is our policy, the design below is provided for educational purposes. Each practitioner should confirm for themselves that the protocol works as required. It is the practitioner's responsibility to determine the suitability of this protocol for any clinical use.

Before using this design, be sure to thoroughly test it yourself, and become familiar with its operation, and ensure that it works as expected, before you schedule and see the client.

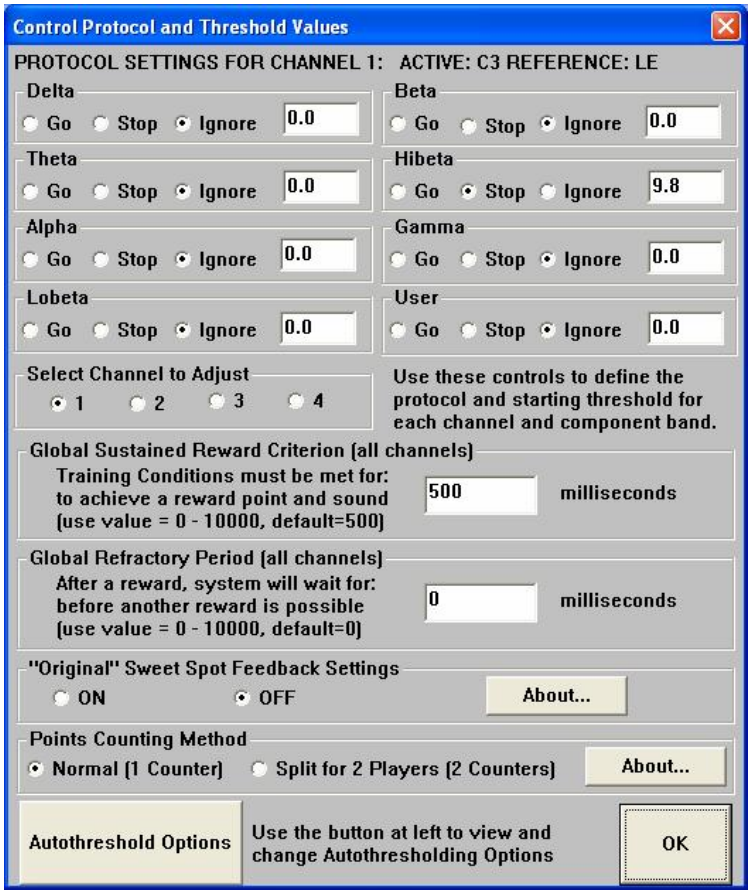
The design is contained in the demonstration folder "Demo Down Coherence 13-18 and Down Power 15-30" available at www.brainm.com/kb

The design shown below achieves this by using a combination of the standard protocol processor (for the inhibit on 15-30 ("High Beta") and using the Event Wizard to do the coherence downtraining.

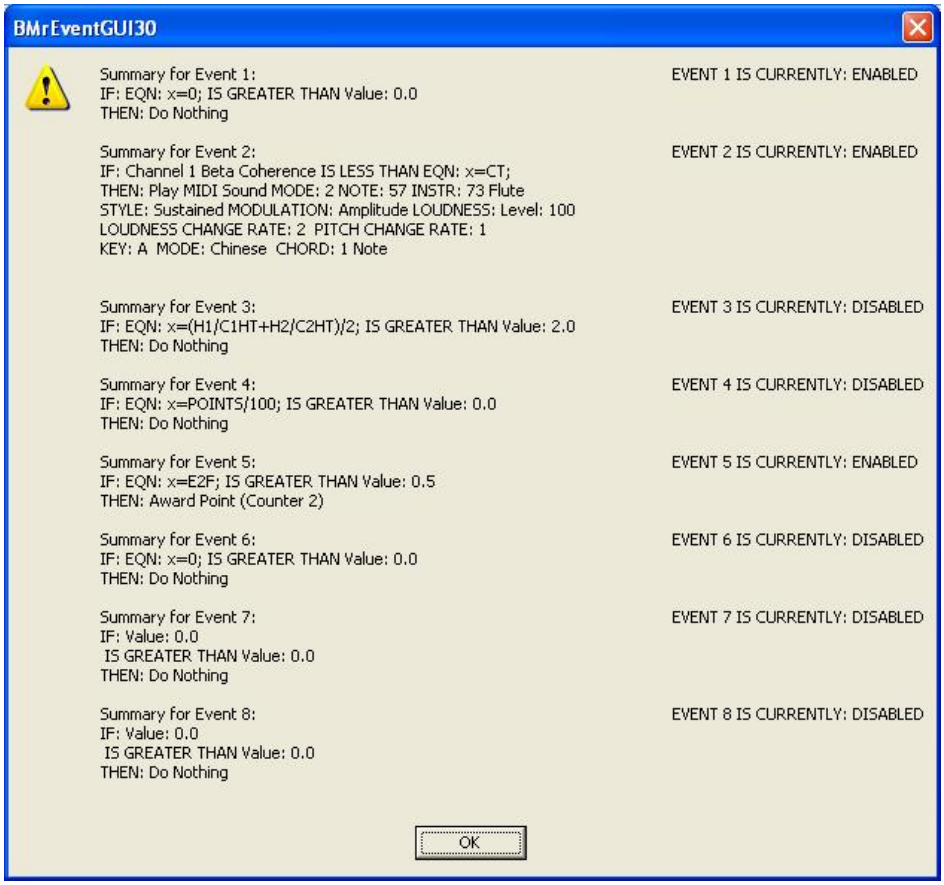
The frequency bands are defined as shown. Note that Beta is defined as 13-18 and Hibeta is defined as 15-30.



The inhibits are created by using the standard Protocol Design control panel (note the “Stop” on Hibeta). This is checked for Channel 1 and for Channel 2.



The Event Wizard Design uses Events 1, 2, and 5:

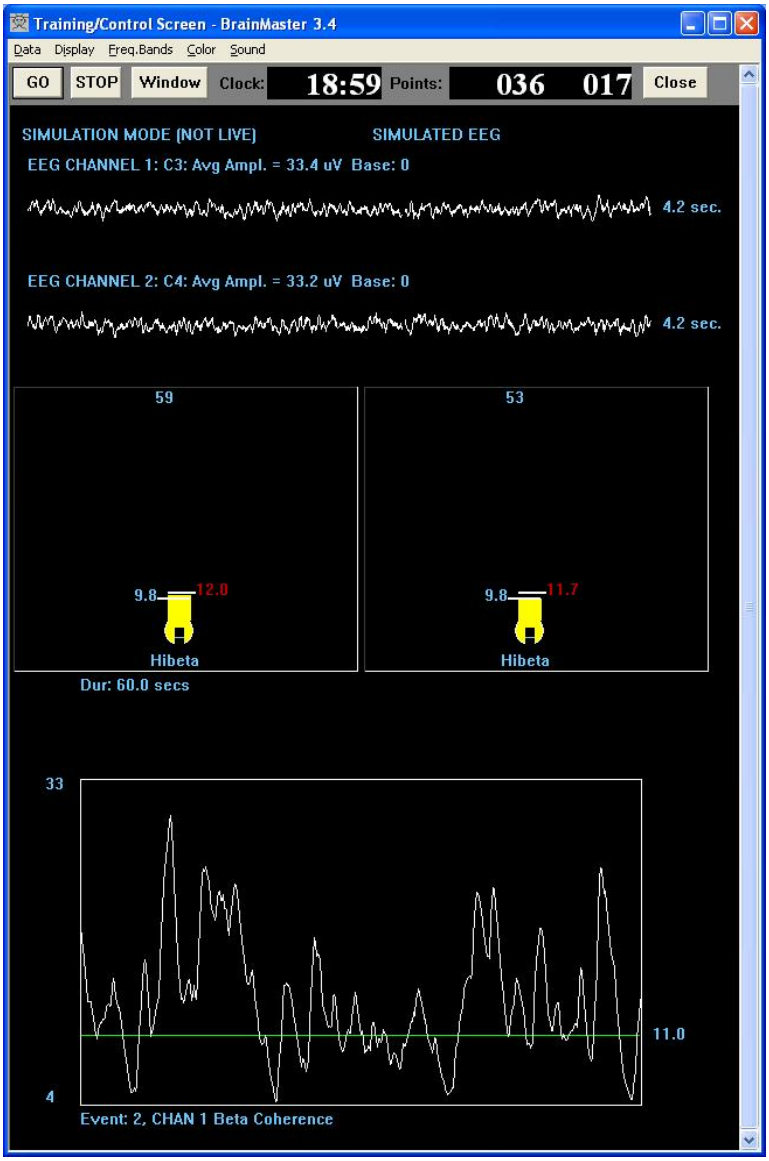


The coherence downtraining is done by Event 2. Event 5 is used to control the Flash games and Multimedia Player, and also to provide points.

The training screen appears as shown. Sounds are only heard when the coherence is below threshold, and the Hibeta amplitudes are also below threshold. If the hibeta cannot get below threshold, there will be no sound. The left points counter counts points for keeping Hibeta below threshold. The right points counter counts points for keeping coherence below threshold, AND keeping Hibeta below threshold.

All thresholds are manually adjusted, as follows:

"h" raises the Hibeta inhibit threshold
"H" lowers the Hibeta inhibit threshold
"c" raises the coherence threshold
"C" lowers the coherence threshold.



The design is set up with connections as follows:

Active 1: C3
Reference 1: Linked Ears
Ground : anywhere
Reference 2: Linked Ears
Active 2: C4

Any pair of suitable sites can be used in place of C3 and C4. The References should be kept as linked ears, and the ground can be anywhere such as Cz, or another ear clip.

To use the protocol generally, do the following to save the settings for future use:

View or Change Settings
Read/Write Settings File
Create New Settings File
(type in settings file name, e.g. “down coherence down power”)
Save Settings to This file

To set up a folder for a client,

Folder Selections
Create New Folder
(type in folder name, e.g. “JTF down coherence & down power”)
Confirm Folder name
Select “down coherence down power” from the settings list
OK
View or Change Settings
Session Control
Change number of sessions to e.g. 40
Change session type to “training”

You are now ready to train a client using these settings. You can change the settings within the new client folder without having to re-save them. The folder will retain any changes to the settings, for that client.

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This design also allows you to review the progress of a session using Review Session Results.

Betacoh 1/2 is the coherence between the channels.

The Hibeta lines show the amplitude of high beta during the session.