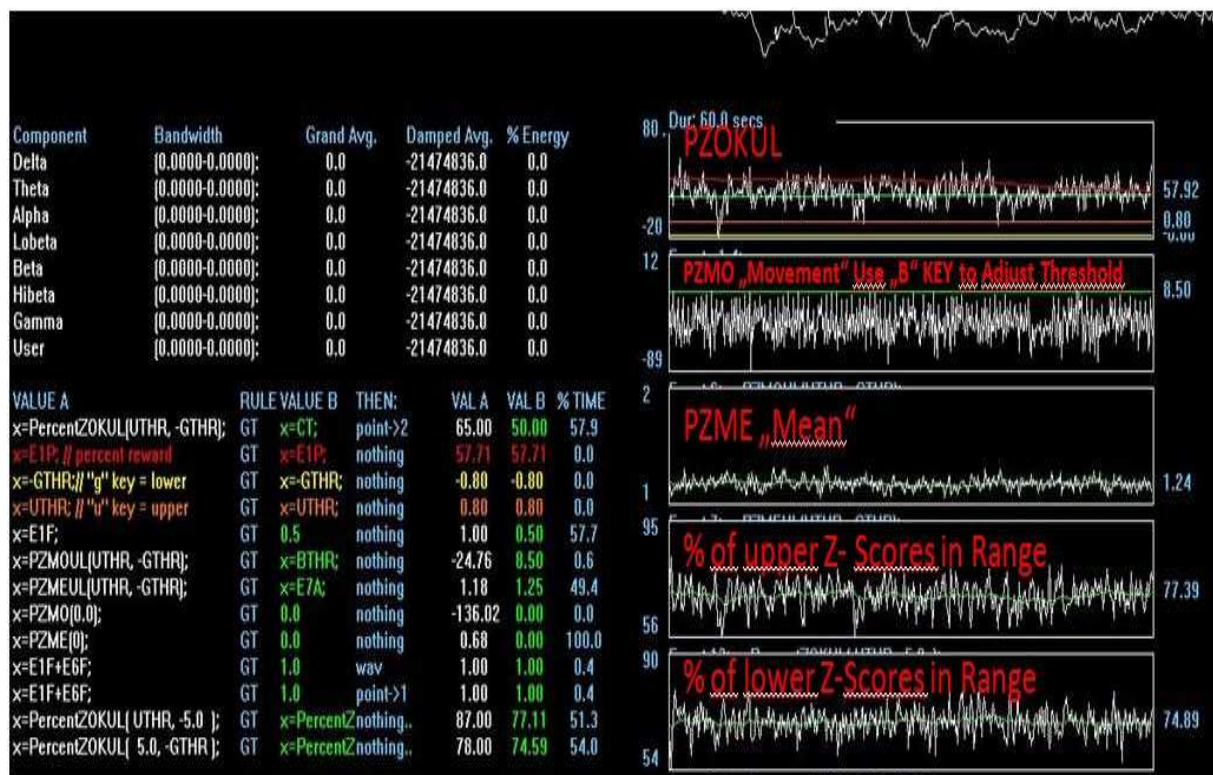**Z Score Plus Niels**

Features:

- PZMO Threshold adjustable on the fly
- PZME with numeral display
- Display of % of upper/ lower Z – Scores in the defined Range (Thanks to Gottfried Arens)
- PZMO Rewarding only when PZOKUL is above Threshold
- Counter for PZMO
- Counter for PZOKUL
- Midi Sounds

Discription:

PZOKUL : How many Z – Score are in the defined Range

PZMO : Movement "What is the tendency to move inward" (gravity). The Threshold defines the percentage of net motion toward the target limits. If you set it to 10 for example, the client hears a " ding" sound, if there is an approximination of 10% to normal . There is a sustained reward time, so that the client has to met this criteria for 100 milliseconds.

PZME : **The average Size** / Mean of the outliers. This value should decrease during training.

% of upper Z – Scores in Range: Shows how many % of the upper Z- Scores are in the defined Range

**% of lower Z – Scores in Range:** Shows how many % of the lower Z- Scores are in the defined Range

1. PZMO Counter : If PZMO and PZOKUL are above Threshold, there is a Point and a "ding" .wav

2. PZOKUL Counter This Counter is active if PZOK is above Threshold (necessary for Flash Games)
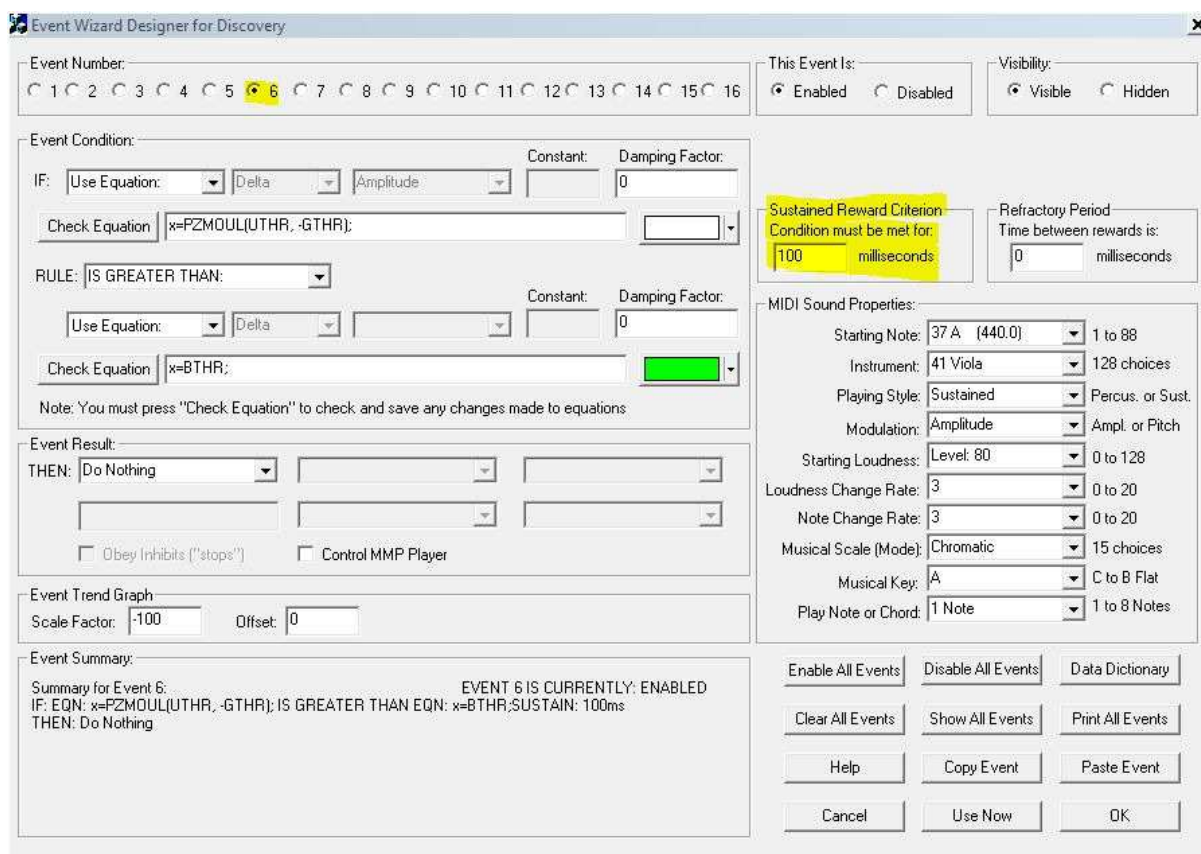
Event 6 : PZMO has a Sustained Reward Criterion(SRC) → 100ms above the defined Threshold.

   Changing the SRC Time or raising the Threshold with the "B" Key will make it harder.

For example : lower Threshold should have larger SRC Time / Higher Threshold should have less SRC
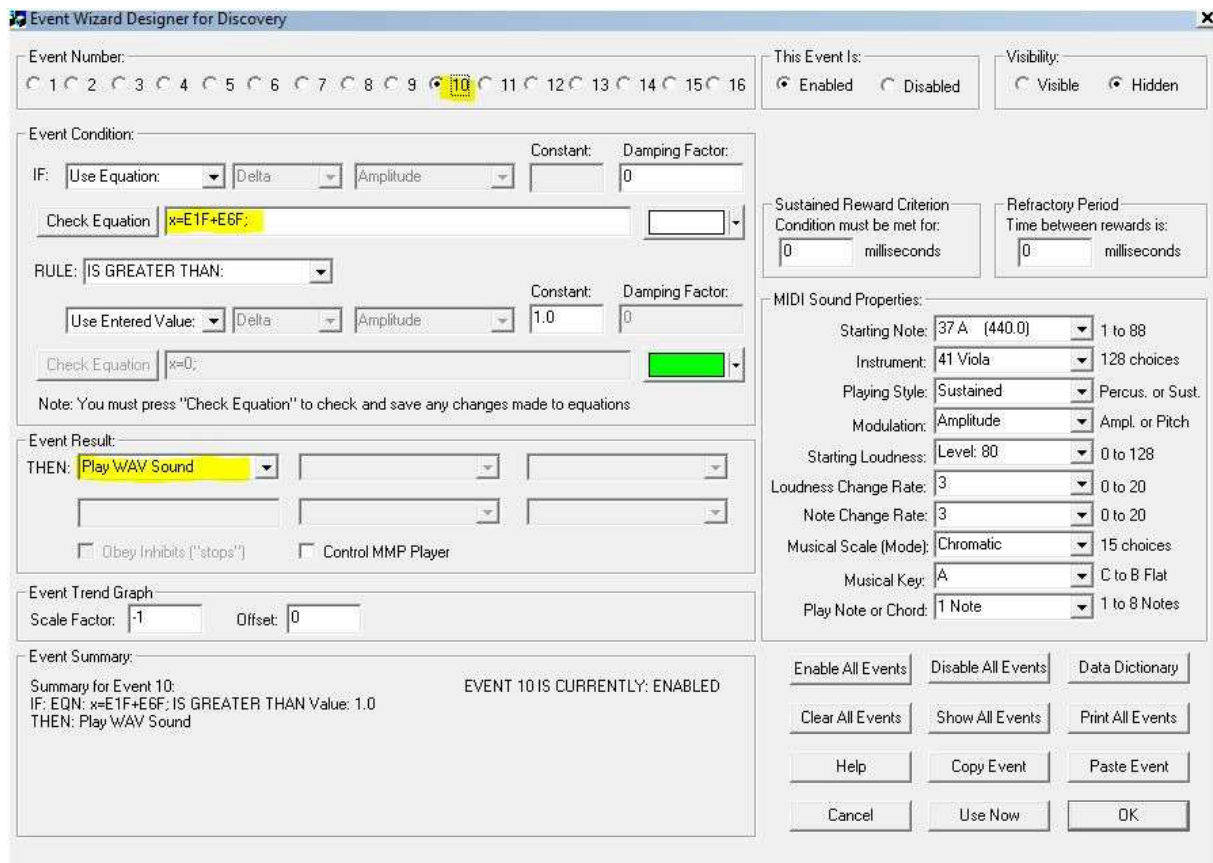
Event 10 : The "Ding" . wav occurs only if PZOK and PZMO met the criteria, this will stop rewarding "light" artifacts. "Heavy" artifact will still cause a reward, I think it's because of the delay of the values going back to zero .

"PZMO by itself will definitely reward artifact. This is a logical consequence of how it is defined. Since the z-scores can go "wild," then there is also a lot of improvement at given instants. So if you blink your eyes, etc., PZMO will definitely achieve some high values at certain moments. This would erroneously reward artifact.(Tom Collura)

Using Reward Sounds (for Flash Games etc.)

To enable the sound just set the "hook" at Events (Use Event Wizard). This will enable the midi sound, if the Percent ZOK threshold is met. I am using the sounds additional for the Flash Games
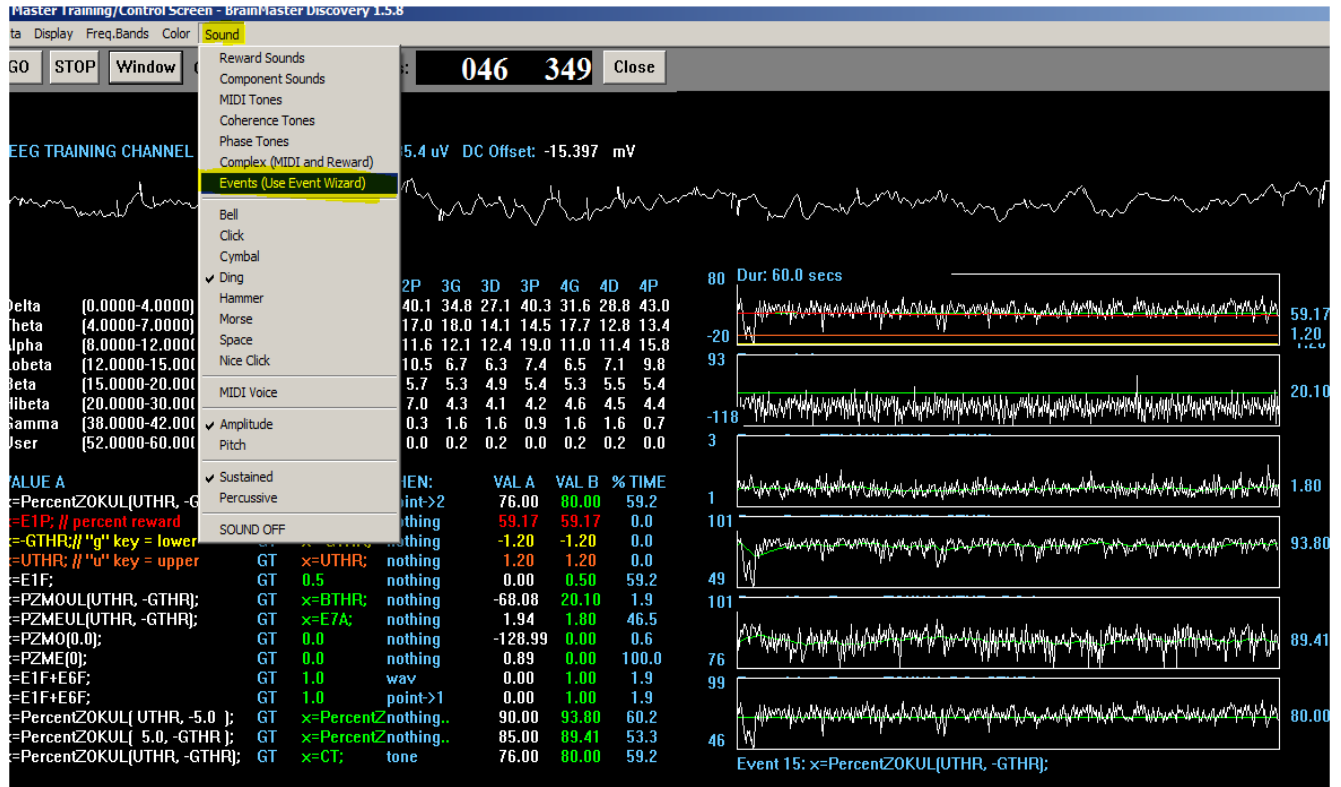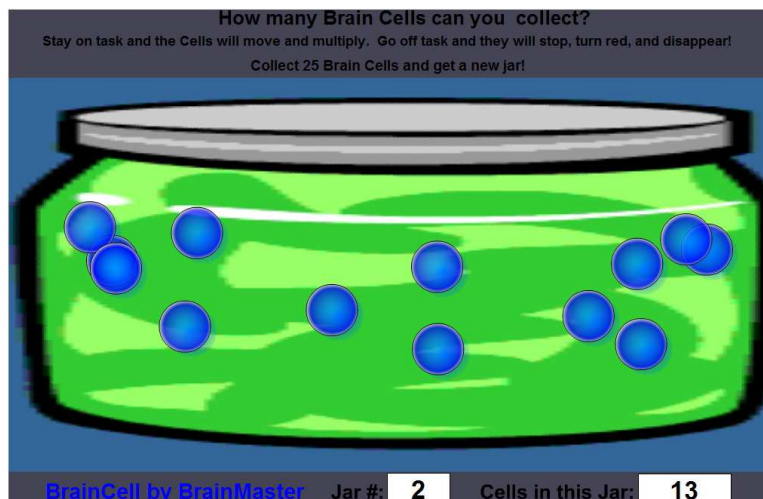
Changing the midi sounds

You can change the sounds/instruments in Event 15. The playing style is defined to percussive, the modulation is on/off.

I am using this settings for the Brain Cells Flash Animation

Thanks to: Dörte, Tom, Thomas and Gottfried ☺

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