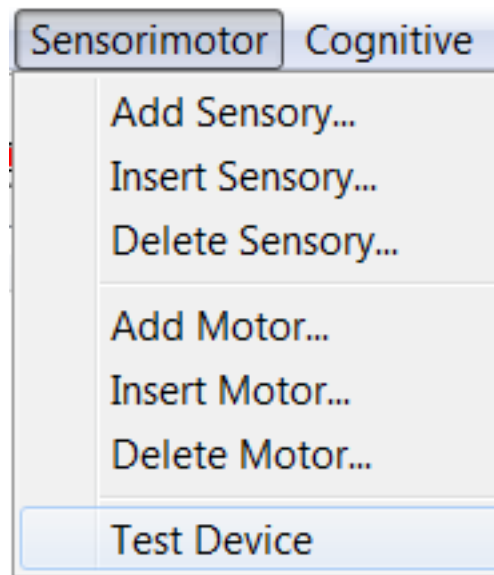


BrainX

Menu Sensorimotor



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Thank you.

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Warnings and Cautions

This software can be used to design paradigms for magnetoencephalography (MEG), electroencephalography (EEG) and functional resonance imaging (fMRI).

The following warnings and cautions appear in this guide. Please ensure you are aware of all the operations and interpretations.

General Information

The sensorimotor menu includes all the functions for delivering somatosensory and/or motor stimuli.

Electrical stimulation of median nerve or fingers is typically used for sensory stimulation. BrainX enables users to control the stimulation system through parallel, serial or USB ports. Since the settings depend on the specific hardware, the parameters may vary from one device to another.

Add Sensory

It adds a sensory stimulation to the end of the stimulus list.

Insert Sensory

It inserts a sensory stimulation to the selected position of the stimulus list.

Delete Sensory

It deletes all sensory stimuli in the stimulation list.

How to setup Sensory stimuli

The dialog for setup sensory stimuli allows defining the parameters for somatosensory data.

Name

It indicates the name of the stimulus.

Trial

It indicates the trials of stimulations.

Duration

It indicates the time for stimulation.

Hint: the duration is not necessarily equal to the stimulation time of the somatosensory stimuli. Typically, the duration is longer than the stimulation time of the somatosensory stimuli.

Interval

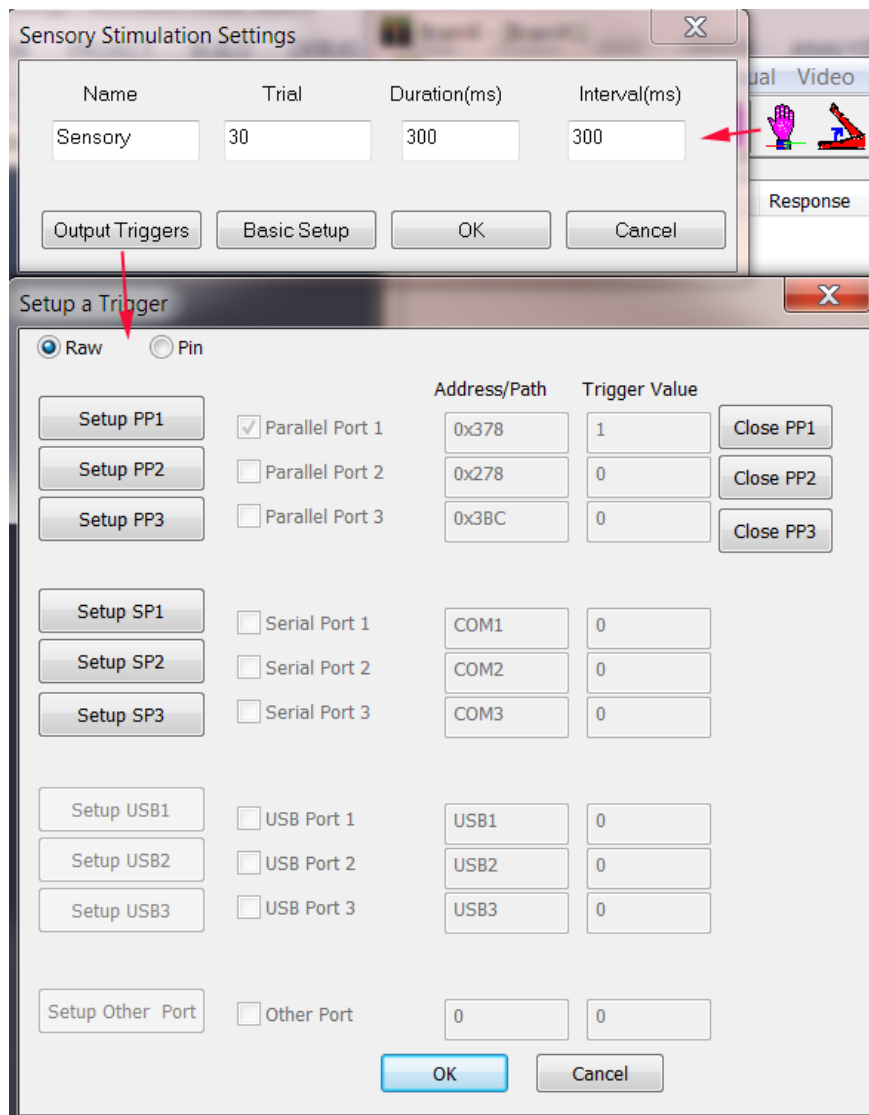
It indicates the interval between two consequent stimuli.

Basic Setup

It shows a dialog to define the basic parameters of the stimulus (e.g. trigger, self-random).

Output Triggers

It shows a dialog to define how the sensory stimulation will be triggered. The trigger associated with the stimulation that will be sent to the stimulation system as well as the MEG/EEG/fMRI systems (which is optional).



Add Motor

It adds a movement (motor) stimulation to the end of the stimulus list.

Insert Motor

It inserts a movement (motor) stimulation to the selected position of the stimulus list.

Delete Motor

It deletes all movement (motor) stimuli in the stimulation list.

How to setup Motor stimuli

The dialog for setup motor stimuli allows defining the parameters for somatosensory data. Motor stimuli are typically performed with response box or key board. BrainX supports up to 10 kind of movements, which are corresponding to 10 fingers.

Any Movement

It indicates that any movement (e.g. any finger typing) will result in the software to send a trigger to the MEG/EEG/fMRI systems.

One Movement

It indicates that one type of movement (e.g. typing on a specific key or a group of keys) will result in the software to send a trigger to the MEG/EEG/fMRI systems.

Two Movements

It indicates that two types of movements (e.g. typing on two keys or two groups of keys) will result in the software to send a trigger to the MEG/EEG/fMRI systems.

Ten Movements

It indicates that ten types of movements (e.g. typing each finger) will result in the software to send a trigger to the MEG/EEG/fMRI systems.

Keyboard Pressing Settings

☒ Any Movement

☐ One Movement

☐ Two Movements

☐ Ten Movements

Motor Input

Trigger Output

Motor Input

Trigger Output

Setup Trigger

12345

One Trigger

12345

Left Trigger

67890

Right Trigger

1

Trigger One

6

Trigger Six

2

Trigger Two

7

Trigger Seven

3

Trigger Three

9

Trigger Eight

4

Trigger Four

8

Trigger Nine

5

Trigger Five

10

Trigger Ten

Name

Trials

Duration

Interval

Wait time

Basic Setup

Motor

30

300

300

3000

OK

Cancel

Setup a Trigger

☒ Raw
☐ Pin

Setup PP1

Setup PP2

Setup PP3

☒ Parallel Port 1
☐ Parallel Port 2
☐ Parallel Port 3

Address/Path

Trigger Value

0x378

1

Close PP1

0x278

0

Close PP2

0x3BC

0

Close PP3

Setup SP1

Setup SP2

Setup SP3

☐ Serial Port 1
☐ Serial Port 2
☐ Serial Port 3

COM1

0

COM2

0

COM3

0

Setup USB1

Setup USB2

Setup USB3

☐ USB Port 1
☐ USB Port 2
☐ USB Port 3

USB1

0

USB2

0

USB3

0

Setup Other Port

☐ Other Port

0

0

OK

Cancel

Name

It indicates the name of stimulations.

Trials

It indicates the trials of stimulations.

Duration

It indicates the time for stimulation.

Hint: the duration is not necessarily equal to the stimulation time of the somatosensory stimuli. Typically, the duration is longer than the stimulation time of the somatosensory stimuli.

Interval

It indicates the interval between two consequent stimuli.

Wait Time

It indicates the time allowed for the software to wait for subjects to type or press the keys or buttons.

Basic Setup

It shows a dialog to define the basic parameters of the stimulus (e.g. trigger, self-random).

Triggers

It shows a dialog to define how the sensory stimulation will be triggered. The trigger associated with the stimulation that will be sent to the stimulation system as well as the MEG/EEG/fMRI systems (which is optional).