Enobio/Starstim integration with Neuroguide

Enobio/Starstim setup

Since Neuroguide's neurofeedback requires linked mastoids reference, you need to place the cable labeled as Oz to the left earlobe using an earclip (or to the left mastoid using a sticker electrode). CMS and DRL should be connected using another earclip to the right earlobe (or sticker electrodes to the right mastoid), as shown in the images below. All the other electrodes should be connected using gel, dry or solidgel electrodes to the corresponding position, as indicated in the labels.



EARCLIP

STICKTRODE

Refer to these user manuals for further information

Enobio manual: <u>http://www.neuroelectrics.com/download/NE_UM_P1_Enobio.pdf</u> Starstim user manual: <u>http://www.neuroelectrics.com/download/NE_UM_P1_Enobio.pdf</u> Electrodes manual: <u>http://www.neuroelectrics.com/download/NE_UM_P2_Electrodes.pdf</u> NIC software manual: <u>http://www.neuroelectrics.com/download/NE_UM_P3_NIC206.pdf</u>

NIC-Neuroguide setup

- 1- Download and install NIC 2.0 (www.neuroelectrics.com/downloads)
- 2- Launch NIC and select Bluetooth, Wifi or USB devices depending on the type of device connection you have and click "Scan". When your device is detected, click "Use this device" and wait for it to connect. Note that Neuroguide only works with Enobio or Starstim with 20 or 32 channels (not with 8).
- 3- Once connected, create a new protocol with the default positions as explained in NIC user manual (<u>http://www.neuroelectrics.com/download/NE_UM_P3_NIC206.pdf</u>)
- 4- Go to Settings of that protocol and make sure that the name of the "Outlet for Lab Streaming Layer" is NIC:

File formats		SD File	EDF+ File
Output Directory C:/Users/St	arlab/Docume	nts/NIC/	
Key Markers			
Key 1	2	Key 6	
Key 2	2	Key 7	
Key 3	2	Key 8	
Key 4	2	Key 9	
Key 5			
TCP Server Activate TCP Server Marken LSL Server	0	Activate TCP S	Server Timestamp
Outlet for Lab Streaming Layer	NIC		
Markers Lab Streaming Layer Markers Lab Streaming Layer			
			ОК

5- In the same computer, install and launch Neuroguide. You'll also need the "The NC collection module for Enobio/Starstim" (<u>http://www.appliedneuroscience.com/Order.htm</u>)

6- Go to Collection → Setup and Monitor



7- Select the device that you have (Enobio20/32 or Starstim 20/32) for Collection and Display montage



8- Introduce data of subject and click OK

🐲 Subject Database			
New Subject Existing Subject	t s⊺est	rebbeca xe JAVI 00001	
First Name Middle Initial Last Name Subject ID Date of Birth Gender Handedness Clinician Technician Medication Subject			Browse
	<u>0</u> K	<u>C</u> ancel	

9- EEG data will start streaming automatically



If you experience any technical issues with Neuroguide, please contact Neuroguide's customer service: <u>http://www.appliedneuroscience.com/Customer_Service.htm</u>

If you experience any technical issues with Enobio/Starstim or NIC, please contact Neuroelectrics' customer service by filling in this form: <u>http://www.neuroelectrics.com/support</u>