

CCEP LOGGER USER GUIDE

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Public Repo: <https://github.com/nssokada/CCEP-Logger>

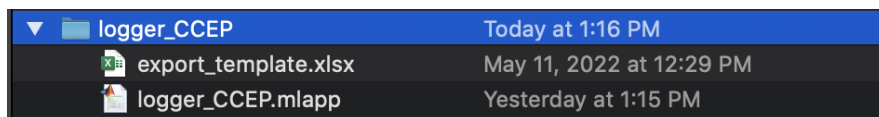
CCEP Logger Applet:

The CCEP Logger Applet was built using **MATLAB 2021b AppDesigner** to provide a *simple* and *dynamic* graphical user interface for the transcription of CCEP logs. This app allows users to standardize the information from logs recorded during intracranial monitoring sessions using the **output** required for the rest of the **CCEP pipeline**.

QUICK START:

1. Set-up

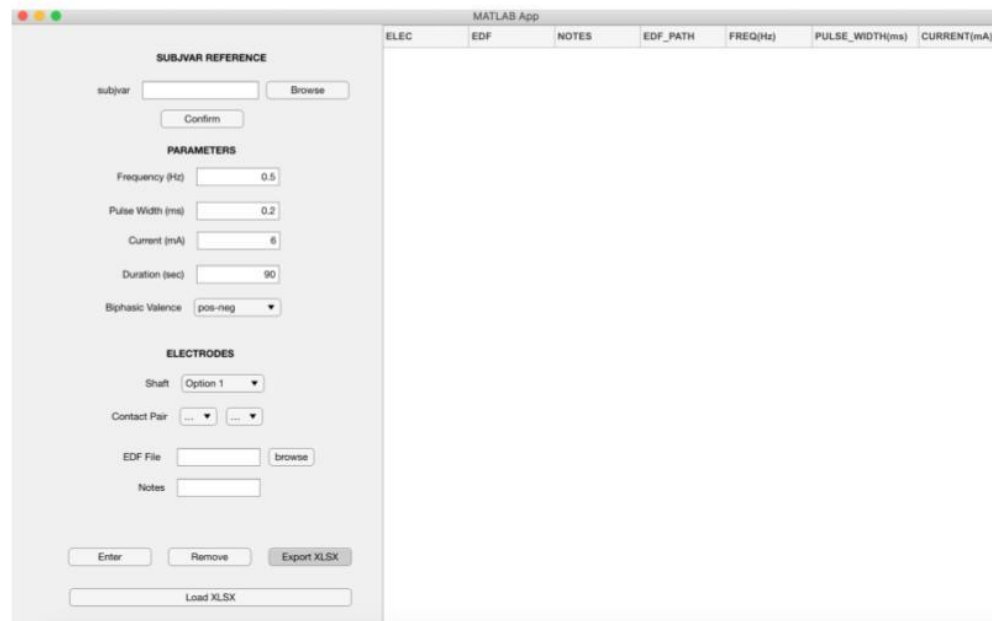
To launch the CCEP Logger Applet, ensure that all components of the application are in the logger_CCEP directory.



2. Launch logger_CCEP.mlapp.

3. Navigate interface:

- Once opened you will see the CCEP logger control panel and logger interface.



4. Load subject variable (subivar):

- Click on the browse button to reference the subivar for the subject. This will auto-populate the interface with information regarding that subject in the CCEP

pipeline.

MATLAB App

ELEC	EDF	NOTES	EDF_PATH	FREQ(Hz)	PULSE_WIDTH(ms)	CURRENT(mA)
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SUBJVAR REFERENCE

subivar **Browse**

PARAMETERS

Frequency (Hz)

Pulse Width (ms)

Current (mA)

Duration (sec)

Biphasic Valence

ELECTRODES

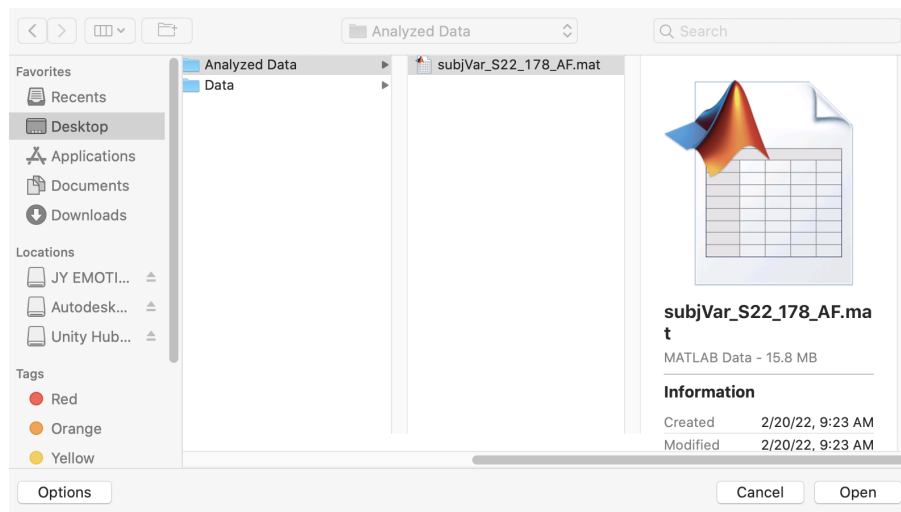
Shaft

Contact Pair

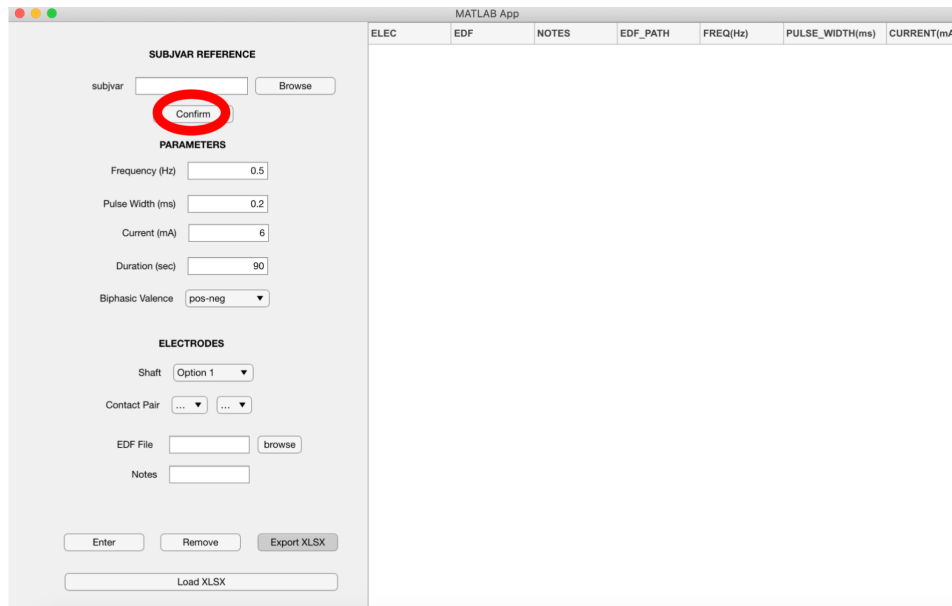
EDF File

Notes

- b. Locate the subject variable in the analyzed data directory for the subject of interest:



- c. Click confirm on the CCEP logger control panel.



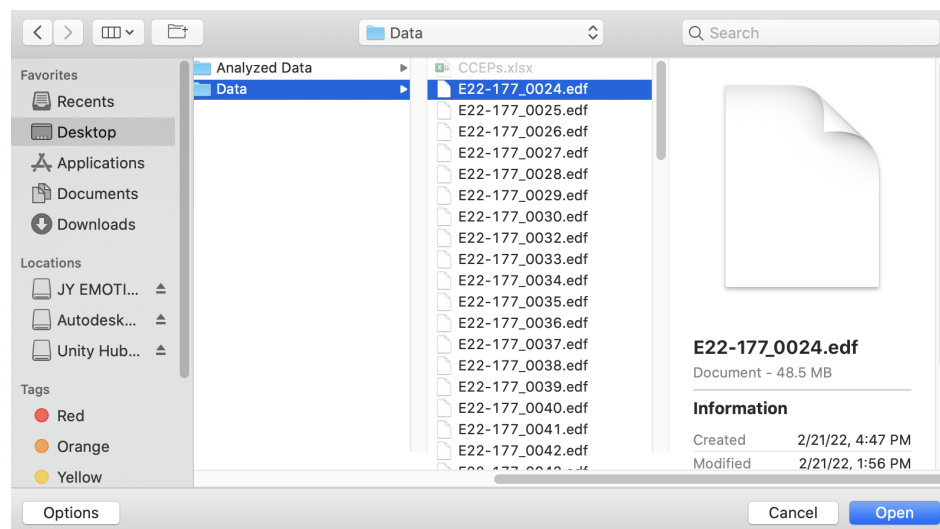
The image shows a MATLAB App window titled "MATLAB App". On the left is a "SUBJVAR REFERENCE" dialog box. It has a "subivar" text field with a "Confirm" button circled in red. Below this is a "PARAMETERS" section with input fields for Frequency (Hz) (0.5), Pulse Width (ms) (0.2), Current (mA) (6), and Duration (sec) (90). There is a "Biphasic Balance" dropdown menu set to "pos-neg". Below that is an "ELECTRODES" section with a "Shaft" dropdown menu set to "Option 1", a "Contact Pair" dropdown menu, an "EDF File" text field with a "browse" button, and a "Notes" text field. At the bottom of the dialog are buttons for "Enter", "Remove", "Export XLSX", and "Load XLSX". On the right side of the MATLAB App window is a table with columns: ELEC, EDF, NOTES, EDF_PATH, FREQ(Hz), PULSE_WIDTH(ms), and CURRENT(mA).

5. Adjust stimulation parameters:

- The CCEP logger will automatically load default values used in most stimulation (0.5Hz, 0.2ms, 6mA, 90 sec, biphasic).
- To adjust these parameters simply click on the textbox and edit the value.

6. Set electrode

- Use the dropdown to select the shaft for the electrode.
- Use the dropdown to select the contact pair for the electrode (once the first contact is selected the secondary contact will auto-populate based on the traditional pairings)
- Use the browse button to select the EDF file corresponding to the electrode



- Add any notes regarding the stimulation or the EDF file.

- e. Press enter to enter the electrode information into the spreadsheet.

The MATLAB App interface displays a control panel on the left and a data table on the right. The control panel includes sections for 'SUBJ/VAR REFERENCE', 'PARAMETERS', and 'ELECTRODES'. The 'Enter' button at the bottom of the control panel is circled in red. The data table on the right has the following columns: ELEC, EDF, NOTES, EDF_PATH, FREQ(Hz), PULSE_WIDTH(ms), CURRENT(mA), DURATION(sec), and BIPHASIC_VALANCE. The first row contains the following data: LAMY2-LAMY3, (empty), (empty), (empty), 0.5000, 0.2000, 6, 90, pos-neg.

7. Repeat Steps 3-6 for each electrode

8. Select Export to export the file as a excel file.

- a. The file will be exported as a XLSX file with the name of the subject in the same directory as the logger

The MATLAB App interface is shown with the 'Export XLSX' button at the bottom of the control panel circled in red. The data table on the right remains the same as in the previous image, with the first row containing: LAMY2-LAMY3, (empty), (empty), (empty), 0.5000, 0.2000, 6, 90, pos-neg.

EDITING AN EXISTING SHEET:

In some cases you may want to edit the values in an existing CCEP Log sheet. If this is the case the logger can be used to load old XLSX sheets into the app to reformat/add cells to the log. To do this simply select the **load XLSX** button and select the XLSX file you would like to load into the program. Then follow steps 3-6 to add new electrodes to the sheet.

REMOVING FROM AN EXISTING SHEET:

To remove electrodes from a sheet press the **remove** button to delete the last row in the log.