

# Ephys pipeline overview

## Folder structure

- Y:\Data\TDTtanks contains the Raw data and sorting related files
- Y:\Data\Monkey\_phys contains the behavioral data
- Y:\Data\Monkey\_phys\_mat\_from\_TDT contains recorded data, arranged in the same trial structure as the behavioral data
- Y:\Data\Monkey\_phys\_combined\_monkeypsych\_TDT contains trial structures with combined behavioral and ephys data

## Plexon file naming

Session\_blocks\_N.plx are based on online snippets

Session\_realigned\_blocks\_N.plx are based on realigned online snippets

Session\_from\_BB\_blocks\_N.plx are based on waveclus clustering

Importantly, when you save a plx file, it never overwrites an existing file, but rather appends "-01" to the file name. If that filename already exists as well, it will append "-02" instead, and so on. That means, all files with "-NN" affixes are manually saved. Because of that, for all steps after sorting, we use plx files with the "-01" affix.

## Waveclus pipeline

1. Fill in [Electrode depth file](#)
2. Create waveclus pre-clustering files (implemented in [phys\\_gui](#))
3. Run waveclus and sort for all channels, don't forget to save (wave\_clus3new3, MATLAB 2014+)
  - Preferentially separate spike shapes in difficult cases
4. Create plxfiles from WC (implemented in [phys\\_gui](#))
5. Check and clean PLX file and **TAKE NOTES** (single/SNR/stability rating)
6. Now we need to assess which units are the same within and across blocks (based on channel, electrode depths, spike shapes and potentially tuning, carefully check notes for this). For that purpose you might want to do the following steps in any order (potentially even going back and forth):
  - Create combined (phys+behavior) files (implemented in [phys\\_gui](#))
  - Plot single unit tuning assuming cells are unique in every block (implemented in [phys\\_gui](#))
    - This is meant to help assessing if two "units" in the same block are actually the same
  - Re-sort PLX file (combining same cells sort codes of same block same channel)
7. If you have finalized the sorting, create combined (phys+behavior) files (implemented in [phys\\_gui](#)) (yes, once again, now that you have a different amount of cells)
8. Complete [Same cells file](#)
9. Automatically update the automatic\_sorting sheet from the [Excel sorting table](#) using [phys\\_gui](#)
10. Copy the automatic\_soting entries to the final\_sorting sheet of the [Excel sorting table](#) and complete with manual entries.

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