

T-Maze daily running protocol in RR3

Daily protocol overview

Start Neuralynx and initialize MATLAB script, weigh rats, run session, feed rat, clean-up.

Set up

- ☐ Turn on computer (password: cheetah)
- ☐ Turn on Neuralynx, wait for it to boot (stable green boot light)
- ☐ Turn on the black interface box above the Neuralynx acquisition system
- ☐ Turn on the white noise machine to the highest setting
- ☐ Open MATLAB (use controlsript_training.m)
- ☐ Once Neuralynx has stabilized, run the Cheetah software, hit *Select A Different Startup File*, open with tmaze_behavior.cfg
- ☐ Open and save a new YYYY-MM-DD_notes.txt file in the daily folder
- ☐ Turn on the wall lights and adjust the dimmer to the marked line
- ☐ In Cheetah, press *ACQ* to start acquisition
- ☐ In MATLAB, change phase.north_first (alternates daily between 1 and 0 for North or South start). Note which start in notes.txt file
- ☐ Initialize and maze by running all but the last cell blocks
- ☐ Check the feeders (dispensed 2 pellets each) and photobeams (the red LED lights up when broken)
- ☐ Go to the vivarium to weigh the rat and bring him to the running room

Run experimental session

- ☐ Put the rat on the pedestal in RR3
- ☐ Hit "Record" in Cheetah for pre-maze pedestal phase (5 minutes to start)
- ☐ Unclick "Record" wait about 1 minute
- ☐ Hit "Record" in Cheetah for maze phase
- ☐ Run the final block of code in MATLAB to start the task
- ☐ Ensure barrier(s) are correct based on MATLAB display
- ☐ Put rat on maze
- ☐ Follow trial sequence from the MATLAB display
- ☐ Put rat on pedestal when trials are completed OR max time has passed (45 minutes to start)
- ☐ Unclick "Record" wait about 1 minute
- ☐ Hit "Record" in Cheetah for post-maze pedestal phase (5 minutes to start)
- ☐ Unclick "Record"

Clean up

- ☐ In Cheetah, unclick ACQ to end the acquisition. Close Cheetah.
- ☐ Close MATLAB.
- ☐ Return the rat to its homecage and back to the vivarium. Feed the rat and note amount in the appropriate binder.
- ☐ Move today's output from the Daily folder to the data folder generated by Neuralynx (*.tmaze.png, *.tmaze.txt, *_notes.txt)
- ☐ Rename Events.nev to YYYY-MM-DD_Events.nev
- ☐ Rename data folder to R####-YYYY-MM-DD_behavior and move to the experience folder
- ☐ Save the data folder to a USB
- ☐ Clean the maze and barriers with Clidox
- ☐ Turn off the white noise machine
- ☐ Turn off the lights, black interface box, Neuralynx and computer
- ☐ Put the data on the server