How to guide: Dot Corridor Speed Discrimination task

Prepare the room

Check reward syringes have correct amount of reward (20ml)  
Turn on 3 screens, fans and breadboard power (3 plugs – s, f, c)  
Check the 3 screen mosaic is working correctly  
Check the wheel rotates freely  
  
Open specific Bonsai version (C:\Users\saleemlab\Documents\GitHub\MatrixRigs\Bonsai\_273)   
Load workflow *DotCorridorTask\_training*   
(C:\Users\saleemlab\Documents\GitHub\DotCorridorTask\BonsaiWorkflows)  
Click onto the first tab ‘Workflow’ then set the parameters as required:

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| MaxInARow: 3 (how many trials can be left or right correct in a row) pRightManual: 0.5 (to try and kerb any mouse bias)  SubjectID: e.g. M25104 SavingBaseDir: e.g. C:\ StimulusID: SDTraining  TaskParamterFile: C:\Users\saleemlab\Documents\GitHub\DotCorridorTask\BonsaiWorkflows\TaskParameterFiles  PreMotionAbort: false in early training, could be true in later stage TimeoutTime: 0 (timeouts can be controlled manually for now)  LRewardVol: set manually in a hacky way for now (not actual volume) RRewardVol: same as above  ISIUpper: 3 (these two define the inter-trial-interval) ISILower: 2 NoLickTime: 0 (time since last lick before next trial can start, generally 0 in early stages) RespWindowDelay: controlled by trial-type generally RespWindowLength: controlled by trial-type generally |

Press play on the workflow  
Push reward to the end manually using keypress: o (left) and p (right)  
Make sure theres no bubbles in the tubes.  
Then end the workflow so these rewards aren’t logged as being given to the mouse  
  
Bring in the mouse and headfix  
Start the workflow   
Start video (shift+m) and wait to start  
Position lickport at appropriate location  
Start the logging (shift+l)  
Select the trial type for the first trials (z, x, c, or v)

Keyboard shortcuts  
  
Z (passive)  
X (active-any)  
C (active-no abort)  
V (active)  
B (pause/timeout – select another trial type to end the timeout)  
  
Shift+M – start video  
Shift+L – start logging  
Shift+S – start task  
  
O (manual left reward)  
P (manual right reward)

Visualisers  
Video of full camera view and crop of mouse jaw to monitor licking  
Task events   
Serial input – check wheel and licks are being streamed from Arduino to bonsai workflow  
Trial info (left and right speed, trial type)  
Trial results (monitor engagement and performance: 0 incorrect, -1 left correct, 1 right correct, 3 no response)