Pyonpyon2 Behavioral Program:

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**Inputs**

## Outputs

### Sound

Sound AO: Audio output (if output from DAQ card)  
Sound card: Sound card number (if output from computer sound card—up to ?10ms jitter)

### Shock Intensity

Shock intensity AO:

### Code/LED DO (and Tone gate PFI)

Bit 0: Stimulation gate (LED output)  
Bit 1: Tone gate (LED output)  
 [Tone gate PFI: PFI channel same as bit 1 above, used to trigger sound analog output]  
Bit 2: Sw1/animal left (LED output)  
Bit 3: Null (reserved for future use)

Bit 4-7: Current trial state

Bit 8-15: Current stimulus trial type

### Switches DI

### Webcam

**Flow Chart**

Only for trial zero

**1: Load Trial**

*Log trial*

**2: Habituation**

(e.g. 180s)

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**6: GO Jumped**

(AKA Hit)

**7: GO Timeout**

(AKA Miss)

*End: Log Dur Shock*

**5: GO Trial**

*End 6: Log Dur Jump*

**9: NOGO Jumped**

(AKA False alarm)

*End: Log Dur Shock*

**10: NOGO Timeout**

(AKA Corr. reject.)

**8: NOGO Trial**

*End 9: Log Dur Jump*

**12: TEST Jumped**

**13: TEST Timeout**

**11: TEST Trial**

*End 12: Log Dur Jump*

**4: Pre**

(e.g. 5s)

*End: Load audio*

**3: Stay Period**

(e.g. 5s)

*End: Load/play click*

Repeat if jump   
during stay period

**15: Done**

**14: Intertr. Intv.**

(e.g. 15-20 + 5 s)

*update stats*

# Preparation code