# Configurations for Bicycles Exhibit

## Brake Exhibit

**MOVIE\_FILENAME**: The name of the movie file that will be loaded and played.  
**THRESHOLD:** list of encoder readings thresholds that correspond to speed change, i.e. When encoder readings produces a value between *SPEED\_TH\_1* and *SPEED\_TH\_2*, the video playing speed will be: *SPEED\_TH\_1*. More steps can be added, be sure to add same step names in VID\_SPEED.  
Ensure values are in ascending order.  
**VID\_SPEED:** video speed factor corresponding to *THRESHOLD*.

## History Exhibit

**MOVIE\_FILENAME**: The name of the movie file that will be loaded and played.  
**THRESHOLD:** above this value on any of the connected encoders – the video will play.  
This threshold applies for all connected devices (bicycles, hand cyclers etc.).  
The Threshold unit is speed.  
**CONVERSION\_FACTOR:** Speed is calculated as ‘Encoder Readings’ \* CONVERSION\_FACTOR.  
**HOLD\_BEFORE\_RESTART**: Time in seconds the program waits before restarting the video if speed is below threshold for all bicycles (i.e. when no one is pedaling).

## Tour Exhibit

**ENCODER\_TO\_SPEED\_CONVERSION:** Speed is calculated as ‘Encoder Readings’ \* CONVERSION\_FACTOR.  
**SPEED\_THRESHOLD:** above this speed value – the video will play, below: will pause.  
**DEBOUNCING\_TIME:** Time in seconds after the button was pressed to ignore other button presses.  
**TIME\_FOR\_RETURN\_TO\_DEFAULT\_SCENE:** Time in seconds the program waits before switching back to the beginning of the default video.

## Race Exhibit (כח חמור כך עיר) Donkey/ Foal

Most of the configurations in this exhibit are for defining the graphics location and layout, they should not be changed in normal operation.

**SPEED\_FACTOR:** factors that translate from encoder to speed, we have 4 factors, 2 for Donkey exhibit and 2 for Foal exhibit,.  
[10, 10, 8.9, 18.7]: [Player 1 DONKEY, player 2 DONKEY, player\_3 FOAL, player\_4 FOAL]

Conversion is: **velocity = encoder\_delta / SPEED\_FACTOR**