

# DESIGN : Controls

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## Summary

The control scheme features two types of controls:

- tilt controls: tilting to move and tapping the powerup button;
- swipe controls: swiping to move and the powerup button.

The controls have the following setup (designated for one-handed/finger/tilt gameplay on the KISS principle since intended for children).

## Tilt Behavior

- Steering
    - o Tilt Control uses the device's accelerometer to control steering of the car
    - o Tilting the device to the left and right will steer left and right, it can be tilted to the left and right if held upright or if held flat
  - Speed
    - o Auto-acceleration will keep the car going at a constant speed
    - o The car will start accelerating when the race is started as well as after you are stunned either by AI or damaging objects
    - o The player cannot reverse back up the track
    - o The tilt controls works by checking the pitch angle of the device, the tilt control has a range of about 20 degrees
  - Camera
    - o The camera always faces down the track (apart from when the player finishes the race)
    - o X position - The camera sticks behind the car, so it is always in the middle X position (1:1 side tracking)
    - o Y position - The camera follows the car in the Y
- Swipe Behavior
- Swipe Behavior

## Swipe Behavior

- Steering
  - o Dynamic (any tap on the screen will facilitate swiping, moving the finger in any direction will make you move either left or right)
- Speed
  - o Auto-acceleration will keep the car going at a constant speed
  - o The car will start accelerating when the race is started as well as after you are stunned either by AI or damaging objects

- o The player cannot reverse back up the track or control the acceleration speed
- Camera
  - o The camera always faces down the track (apart from when the player finishes the race)
  - o X position - The camera sticks behind the car, so it is always in the middle X position (1:1 side tracking)
  - o Y position - The camera follows the car in the Y
- Control Visibility
  - o No controls-related icons are ever visible.
- Controls & Screen Edge Interaction (Play to border)
  - o When the virtual circle around the finger reaches the edge of the screen it stops
  - o IF the player taps on the edge of the screen, the movement circle is centered on the tap, this means the player cannot move in the direction OFF the screen, but can move in the direction of ON screen
  - o Touching the edges of the screen (but not completely leaving the screen) with a swipe will keep moving the car in that direction

## **Power-up Button Behavior**

NOTE: Power-up button behaviour is the same across both control methods.

- Position
  - o Is positioned on the right side of the screen.
- Size
  - o The button requires a larger minimum size than that shown in the mockup (min 44 pixels smallest dimension)
- Appearance
  - o Power-up button icon should show what the power-up is
- Button Activation
  - o Tap and release within the button when you have a powerup, activates it
  - o Dragging through the button should NOT activate it
  - o Tapping and dragging off and releasing off the button should NOT activate it
- Button States
  - o Inactive - Player cannot tap it, they do not have enough power-up points. It is semi-transparent
  - o Available - Player can tap it
  - o Tapped - Button has been tapped. It will activate if touch is released within the button. Button tints white and scales up slightly
  - o Activated - Power-up is activated. Button returns to normal size, Button glows to show it is active