

Flippers in Lab 3 SP23

Contents

Flippers in Lab 3 SP23	1
Flipper basics.....	1
Hitbox.....	1
Left hitbox	1
Right hitbox.....	1
Changes to ball data.....	1
Flipper Messages	2

Flipper basics

There are 2 “flippers” at the bottom of the table. We will simulate something only somewhat like real pinball table flippers.

Hitbox

There is a zone defined for each flipper. If a ball winds up in the flipper hitbox, the flipper activates and changes the ball data. Your code will also output appropriately when that happens.

Left hitbox

The left hitbox is defined as:

- $-5.0 \leq X \leq -2.0$
- $0.0 \leq Y \leq 1.0$

Right hitbox

The right hitbox is defined as:

- $2.0 \leq X \leq 5.0$
- $0.0 \leq Y \leq 1.0$

Changes to ball data

Both flippers do the following

- Add 75.0 to VY
- Add 1.0 to Y

For the left flipper

- Add 6.4 to VX

For the right flipper

- Add -6.4 to VX

Flipper Messages

The text mode messages are shown in the output document text section. They use similar formatting to the wall messages.

Graphics mode output has two parts:

- Status message via `pb_status`
 - `Left_flipper`
 - `Right flipper`
- Show the correct flipper on the table via:
 - `pb_left()`
 - `pb_right()`

You can find examples of the messages and a visible flipper in the screenshots in output and other documents.