Gateball Simulation

https://garethdenyer.github.io/gateball/
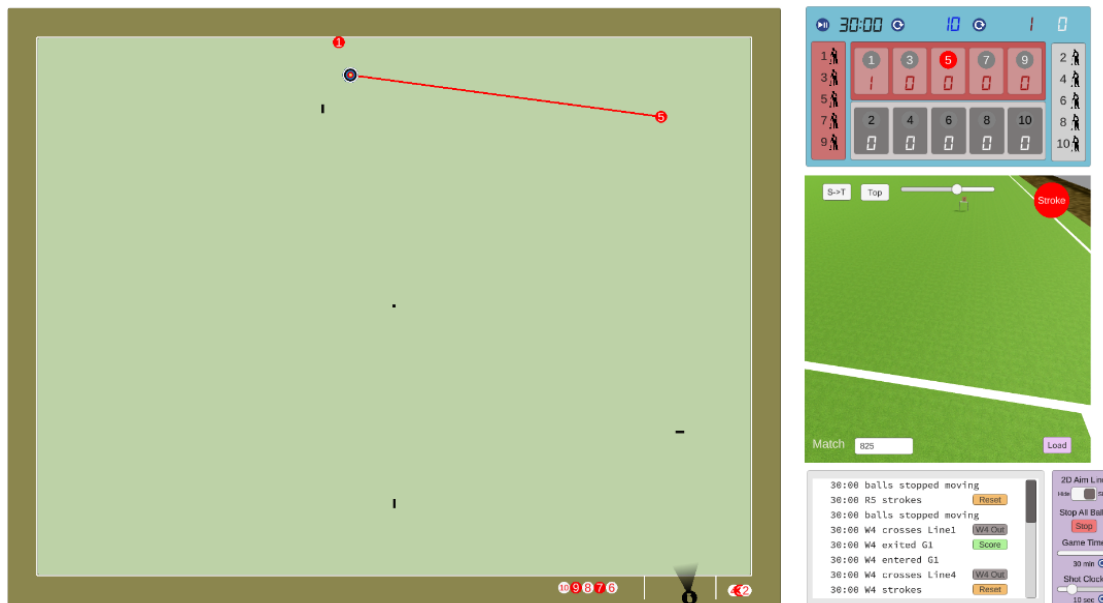
The main screen has five panels (most can be dragged around)
- 2D overhead view of the court
- Scoreboard/timer and player attribute panel
- 3D perspective view of any part of the court you want
- Shot Log
- Control Panel for adjusting game time, etc

Playing a Shot

- On the Timer/Score Panel, click the circle showing the number of the stroker ball.
- On 2D view, drag the target to where you want the ball to travel
  - [You can show or hide the aiming line using the button on the Control Panel]
- Press the Stroke button

Things that happen as a result of the shot will appear in the Shot Log

Whilst any ball is moving, the Stroke Button is hidden and the ability to select other balls is prohibited. In case it is taking too long for balls to be registered as not moving, click the STOP ALL BALLS button.

Scoring

Scoring is done manually but you get some intel on whether a ball has entered/exited a gate from the ShotLog panel.
Click the score for the player on the scoreboard. It will advance 1..2..3..5, each time
To reverse scores, press SHIFT as you click the score

Agari

SHIFT clicking the circle showing the ball number will remove it from the lawn and place it in the bottom right corner of the lawn.
This method is also good for retrieving a ball you've hit into the car park or a ball that failed to make the first gate.

Sparking

Collisions between the Stroker ball and other balls register in the Shot Log

R3 hits W2   Touch W2

If you decide that a Touch has been made, click the "Touch" button in the Shot Log.
This will move the touched ball to the Stroker ball. The Stroke Button becomes the Spark button and the target/aimline show the desired trajectory of the sparked ball.

Player Attributes

The ability of each player in terms of aiming and distance judgement can be altered.

Click on the player icon   6   in the Timer/Scoreboard to adjust - remembering to press the Submit button to save the changes.

3D view

- Drag the camera icon   in the 2D overhead view to move the camera that captures the 3D view
- The depth of field of the 3D view is changed using the slider bar at the top.
- The button labelled "**S->T**" positions the camera behind the stroker ball, looking towards the target (the typical view of a player as they take a shot)
- The button labelled "**Top**" positions the camera immediately above the court, wherever the camera icon on the 2D overhead view has been placed.
- The 3D camera can be panned left/right and up/down using the keyboard arrow keys
- An aimline is always shown on the 3D view

Outballs

An invisible detector is positioned exactly one ball diameter from the outer edge of the boundary lines. Thus when this is triggered by an in-ball, that ball must now be OUT. This is registered in the ShotLog and a button appears allowing you to flag the ball as OUT. This makes the colour of the ball in the 2D view grey, and the ball is positioned 10 cm from the boundary line.
The grey colour is corrected when the ball is selected as the new Stroker ball.

When the detector is triggered by an out-ball, this serves as confirmation that the ball is now an in-ball.

Game Time and Shot-Clock

Clicking the start/stop button on the Timer/Scoreboard activates or halts the game countdown (by default set to 30 min).

The shot-clock (by default set to 10 seconds) is started when a new Stroker is selected or when the balls from a previous shot have stopped moving.

Both Game Time and Shot-Clock durations can be altered using the sliders on the Control Panel (click the 'reset' icon after dialing up the desired time).

Position Recording, Resetting and Loading

Just before each shot, the game situation (position of each ball, score, time and player attributes) is recorded and can be reset.

The "Load" button enables you to enter any MatchID and shot number and retrieve any position/time from that match. This enables positions and game scores, etc, from other games to be loaded. For example, Match 812 Shot 2 is an interesting puzzle (R1 to play, 15 min on the clock).