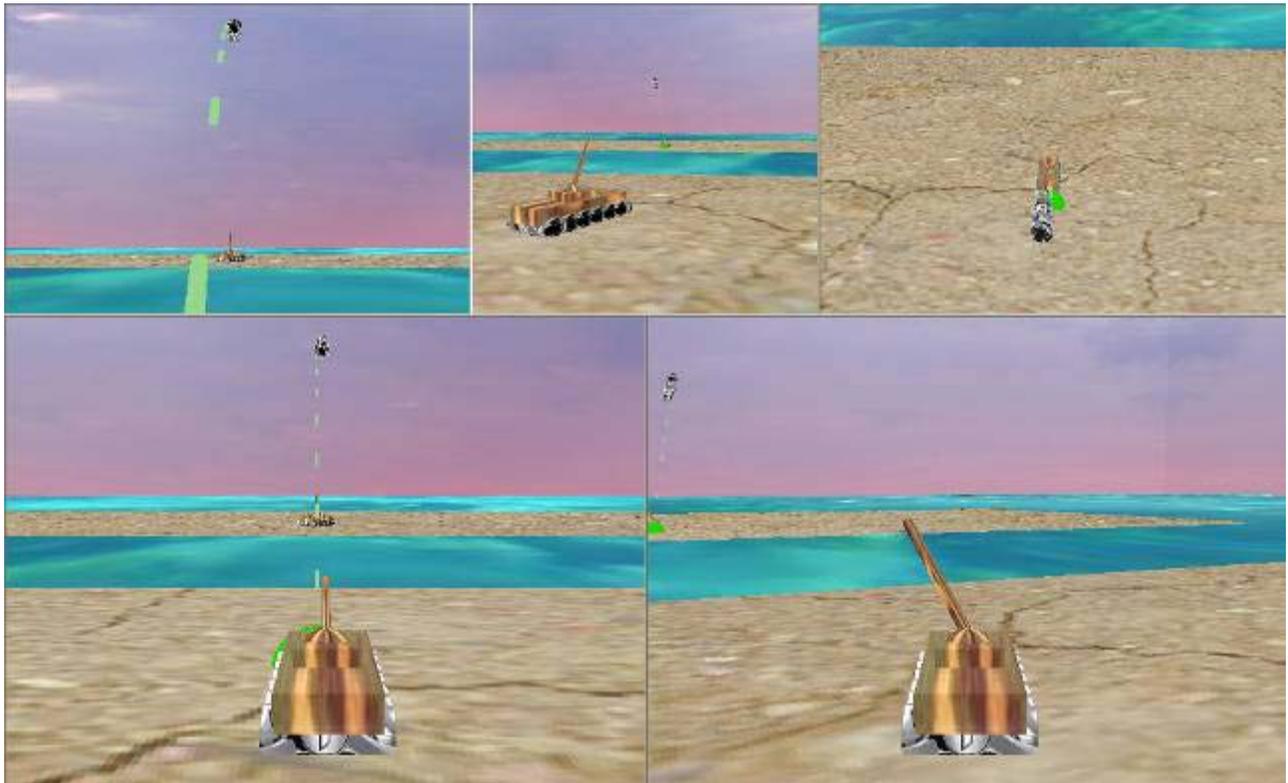


# Tanks

## User Manual

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## Gameplay:

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There are 2 tanks in the world. One player controls one of the tanks and the other player controls the other tank. The goal of the game is to shoot and destroy the other tank. The tanks will be in a 3D world separated water so they won't be able to drive close to each other.

The game ends when one of the tanks is destroyed. Each of the tanks has health and the health is decreased each time a missile collides with it. The tanks will be able to shoot missiles and special homing missiles.

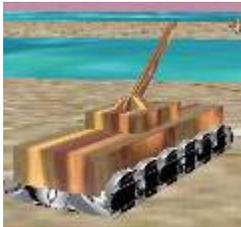
## Tank

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Each player will control a tank.

The Tank can move in the following ways:

- The turret can rotate in two directions. This is used to aim.
- The tank can drive around the world but cannot drive on the water.
- Each tank has its own health meter that will decrease each time the tank collides with a missile. When the health meter is depleted, the game is over.



## Missile

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- Both tanks can shoot missiles
- Missiles have a starting velocity chosen by the player. In general the player will want to aim for the other player.
- The player can control a missile once it is in the air.



## Homing Missile

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- Homing missiles are the same as normal missiles but will home in slightly toward the other tank to make it easier to aim.
- "Homing Missile" mode can be enabled/disabled for both players via the GUI.

## Bullet

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- The tanks can also fire bullets
- Bullets are used to destroy incoming missiles out of the air.
- Bullets do not cause damage to the other tank.



## Controls

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Player 1 (Left side):

- Arrow Keys: **[W][S][A][D]** for up/down/left/right (respectively)
- Launch Missile: **Left-Ctrl**
- Fire Bullet: **Space Bar**
- Alternate Control: Hold **Right Shift**

Player 2 (Right side):

- Arrow Keys: Normal **[up][down][left][right]** arrow keys
- Launch Missile: **Right-Ctrl**
- Fire Bullet: **Enter**
- Alternate Control: Hold **Left Shift**

### Each Tank has the following controls:

**Aim Turret:** [Alternate Control] + [Arrow Keys]

The turret controls the initial direction of the missile. To adjust the turret's aim, the player must press and hold the Alternate Control button and then use the arrow keys to aim the turret up, down, left, and right. Note: When a missile is active, the tank cannot aim.

**Power:** Hold [Launch Missile] key

While holding down the Launch Missile button, the power will continuously increase until it reaches max and then decrease. This loop will continue until the button is released.

**Launch Missile:**

To launch a missile, the user presses and then releases the fire button. Hold the fire button down to select how much power to use. The power meter will cycle up and down while holding the 'Fire' key.

**Control Missile:** [Alternate Control] + [Arrow Keys]

Once a missile is launched, the player can adjust the missile's flight path using by holding down the alternate control button and using the arrow keys to push the missile forward, back, left, and right. Note: If Homing Missiles Mode is enabled, the player cannot control the missile.

**Fire Bullet:**

Press the Fire Bullet key. Repeatedly tap the key to fire many bullets.

**Move Tank:** [Arrow Keys]

The entire tank can move forward or backward using the up and down arrow keys. The tank can also turn (rotate) using the left/right arrow keys.

**GUI:**

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Player 1 and Player 2 each have the following set GUI elements:

- **Tank View:** Will follow behind Player's tank as a 3<sup>rd</sup> person POV.
- **Weapon View:** A 1<sup>st</sup> person camera view from the end of the turret. This shows where the tank is currently aiming. If a missile is active, this view will follow the missile.
- **Health Bar:** This shows how much health the tank has left.
- **Power Bar:** This shows the initial speed of the next missile when it launches.

The following are shared by both players:

- **Top View:** Will show the entire world from up in the sky looking down: a bird's eye view. The user can left-click and drag to pan around the Top View. Right-click and drag in the Top View will zoom in and out.
- **New Game:** Initialize model and begins game.
- **Pause:** Suspend/Resume game.
- **Homing Missile Mode:** Enable or disable homing missiles by clicking the Homing Missile checkbox option.
- **Missile Turning Radius:** Adjust how quickly the missiles can turn by adjusting the Missile Turning Radius slider bar. The range is from 1 to 5, slowest to quickest turning, respectively.

