

5 THE GAME

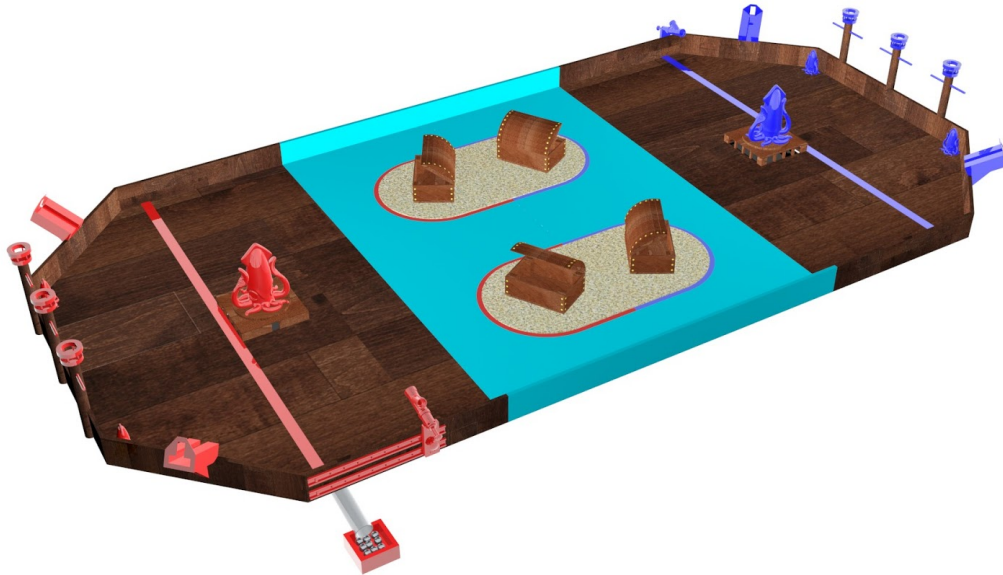
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5.1 GAME OVERVIEW

High Tide is a game played in the arena illustrated below. A red alliance and a blue alliance, composed of three teams each, compete in each match. The object of the game is to attain a higher score than your opponent throughout the course of a match. The point values for each method of scoring are explained below.



Note: The illustrations in this section of the manual are for a general visual understanding of the High Tide Ocean only. Please refer to the official drawings for more accurate dimensions and construction details.

5.1.1 Match Format

Each match begins with the 20 second Autonomous Period, in which the Robots are controlled by pre-programmed instructions. The Autonomous Period is followed by the 2 minute Teleoperated Period, during which the drivers assume control of the Robot. There will be a short pause between the Autonomous Period and the start of the Teleoperated Period as the teams' controls are activated and Field Attendants reset any Robots that tipped over during the Autonomous phase.

5.2 DEFINITIONS

Alliance: A set of three teams that work together during a match to play High Tide against an opposing alliance. Alliances are identified during the match by their assigned color, either red or blue.

Match: A single round of play in which alliances attempt to outscore their opponent.

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Penalty: A 15 point increase in the opposing alliance's score of the offending Robot assigned when each deserving violation of the game rules has been identified by a referee.

Referee: A trained Team Driven staff member led by the head referee, responsible for assisting teams, monitoring gameplay, and enforcing the rules.

Robot: Anything that has passed Robot inspection that a team places on the arena prior to the start of a match.

Team: Two representatives from a registered Junior Robotics League team that interact with their Robot and their alliance partners to play High Tide. The positions on the team include:

Driver: A representative from a registered Junior Robotics League team responsible for operating and controlling the Robot.

Human Player: A representative from a registered Junior Robotics League Team responsible for entering Cannon Balls and Coins onto the field using human player stations.

Autonomous Period: The period in which only pre-programmed instructions control the Robot.

Starting Zone: The Robots must have at least one point of contact along the back deck wall.

Teleoperated Period: The period in which Drivers control the Robot.

Climbed: A Robot must be fully supported by the crossbar of the mast and have no contact with the ground.

Protected Zone: An area where Robots will be penalized for touching an opposing alliance Robot. The penalty will be awarded to the alliance who owns the zone.

5.3 RULES

5.3.1 Safety

<S01> If at any time a Robot's operation or design is deemed unsafe; it will receive a Penalty. If the safety violation is due to the Robot design, the head referee has the option to not allow the Robot back onto the Ocean until the design has been corrected. An example of unsafe operation would be uncontrolled motion that cannot be stopped by the drivers.

<S02> Drivers and Human Players may not directly contact any Robot at any

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time during the match. Illegal contact will result in a Penalty. Recurring contact may result in disqualification.

<S03> Drivers and Human Players may not directly contact any Cannon Balls or Coins at any time during the match while in the Ocean. Illegal contact will result in a Penalty.

5.3.2 Game Periods

<G01> Autonomous Period – The Autonomous Period is the 20 second period at the start of the match. During this period, the Robot may react only to preprogrammed instructions. During Auto, Robots will receive points for moving out of their Starting Zone, placing Coins in the Treasure Chest, or placing Cannonballs into the Scuttle. Each team will receive 1 Coin or 1 Cannonball to possess at the beginning of the match.

<G02> Teleoperated Period – The Teleoperated Period is the 2 minute period of game play immediately following the Autonomous Period. At the beginning of the Teleoperated Period, the remote controls are activated and drivers may commence driving their Robots. The drivers continue to operate their Robots for the remainder of the Match. The Match and Teleoperated Period will end when the arena timer displays zero seconds. During the Teleoperated period, Robots will receive points for placing Coins in Treasure Chests, getting Cannonballs into the Scuttle to defeat the Kraken and, pushing Squids into the Sea or onto the opposing alliance deck.

<G03> Endgame Period - The Endgame period is the last 30 seconds of the teleoperated period. An announcer will signal or verbally remind teams when Endgame has begun, however, teams should not always rely on this.

5.3.3 Scoring

<G04> All points scored are awarded to the Alliance associated with the scoring Robot.

<G05> Autonomous Period – During the Autonomous Period, a Robot will earn 5 points for partially or entirely crossing the mobility line, 15 points for placing a coin in a treasure chest and 6 points for placing a cannonball in the scuttle.

<G06> Teleoperated Period - During the Teleoperated Period, an Alliance will earn points for each Coin placed in the Treasure Chest, each Cannonball placed in the scuttle, each Squid that is removed from an alliances deck and for defeating the Kraken.

<G07> Coin Scoring - After autonomous, a coin can be put inside either one of the two alliance chests for 5 points per coin.

<G08> Cannonball Scoring - At the end of autonomous, Cannonballs may be put in the scuttle to defeat the kraken. Bonus points worth 30 points will be awarded

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for defeating the Kraken. A Kraken is considered defeated after 20 Cannonballs have entered the scuttle.

<G09> Squids - Squids can be moved at any point in the match but will be counted at the end of each match based on the location of the squid. See the table below for scoring. Squid that are partially in two locations at the same time will be awarded the higher point location.

Field Location	Alliance Deck	Sea	Opponent's Deck
Points	0	10	20

<G10> Masts - The masts are available for climbing. 30 points will be rewarded at the completion of a match for each Robot that has climbed. A robot is considered to have climbed if all parts of a robot are off the deck once the match clock reaches 0.

5.3.4 Game Play

5.3.4.1 Starting Conditions

<G11> Robot Starting Positions – Prior to the Match, each Robot must have at least one point of contact with the back deck wall.

<G12> Robot Alignment Devices – Alignment devices (templates, tape measures, etc.) that are not part of the Robot may not be used to assist with positioning the Robot. Teams that use external alignment devices to position their Robot will receive a penalty.

<G13> Robot Starting Size – At the beginning of a Match, each Robot must not exceed the maximum size allowed in *Section 6 – The Robot*. The head referee may inspect the Robot size prior to the start of any Match. Robots in violation may be prohibited from participating in the Match.

<G14> Game Piece Locations – Each Human Player stationed at a coin slot will have 40 Coins at the start of the match. Each Human Player stationed at a cannon will have 10 cannonballs that will be recycled back automatically to the Human Player after being scored.

<G15> Ocean Equipment – Other than the game pieces and competing Robots, no other items shall be placed on the Ocean prior to, or during, the Match.

5.3.4.2 Match Play

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<G16> Robots may not intentionally contact or impede the actions of the other alliance's Robots inside the designated protected zones. The offending Robot will receive a penalty for each time contact is made with an opposing Robot in the designated protected zones.

<G17> At any time during a match, a Robot may not intentionally have more than 5 Coins and 5 Cannonballs in their possession. Doing so will result in a penalty for every item over the previously stated limit.

Explanatory Note: In this context, to be in "possession" means Coins/Cannonballs must be in the Robot or be intentionally pushed by the Robot.

<G18> Causing Penalties – A Robot's action shall not cause an opposing Robot to break a rule and thus incur penalties. Any rule violations committed by the affected Robot shall be excused, and no penalties will be assigned for violations committed by the affected Robot.

<G19> Alliance Penalties – Unless otherwise noted, all penalties assigned by referees are applied to the entire Alliance score.

<G20> If at any time during the Match Coins or Cannonballs exit the Ocean, the Coins will be replaced were they left the field and Cannonballs will be return to their human player.

5.3.5 Robot Operations

5.3.5.1 Robot Movements

<G21> Robot out of Bounds – Any Robot that entirely leaves the Ocean boundary will be disabled for the remainder of the period (either Autonomous or Teleoperated). The Ocean boundary is defined as the outside plane of the outer walls of the Ocean. No Penalty will be assigned provided no other rule is violated.

5.3.5.2 Robot Interactions

<G22> Arena Interaction – Robots may not grab, grasp, or attach to any Ocean structure other than the mast. If a Robot violates this rule, the offending Team will be given one warning. If the referee determines that the Team is disregarding the warning, they will be issued a Penalty and their Robot will be disabled for the remainder of the Match. Robots that become entangled in the Ocean elements will not be freed until after the match has finished, unless the Robot Entanglement represents a safety hazard.

<G23> Arena Damage – Any Robot that has damaged any part of the Ocean may be disabled if the head referee determines that further damage is likely to occur. The Team may be required to take corrective action (such as eliminating sharp edges, removing the damaging

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mechanism, and/or re-inspection) before the Robot will be allowed to compete in subsequent Matches.

<G24> Disabled Robots and Penalties – If a Robot becomes incapacitated (e.g. the Robot overturns and cannot be righted, the battery falls out, etc.), it may be completely disabled. Drivers of disabled Robots will be asked by referees to place their controller on the ground. Robots that are disabled in this manner cannot incur further penalties. Disabled Robots may be pushed out of the path of travel without Penalty. If a robot overturns and cannot be righted on its own during the autonomous period, a Referee will place the robot on it's wheels as soon as possible during the teleoperated period without interfering with the actions of other robot.

<G25> Autonomous Interaction – If a referee believes a Team's autonomous code was written to purposefully interfere with the opposing Alliance's Robots, the offending Team's code must be altered to avoid interference with the opposing Alliance. Any alteration must be shown to a knowledgeable Team Driven staff member before it is permitted to play in another Match.

<G26> Robot Entanglement – Entangled Robots will be disabled if attempts to disengage cause damage to another Team's Robot or create a dangerous situation. If it is determined that a Robot intentionally entangles an opposing Robot, the offending Robot will be disqualified. If, due to loose cables, hoses, cords, etc., a Robot unintentionally but routinely entangles another Robot as a result of normal game interaction, the Robot may be disqualified. The Team will be required to repair the entangling elements before the Robot will be permitted to participate in subsequent Matches.

<G27> Arena Reset – Robots must be designed to allow the release and removal of any game pieces from the Robot after a Match. If a Robot violates this rule, the offending Team will be warned and requested to modify the Robot. If the modification is not made, the Robot may not be permitted to compete in future Matches.

5.3.6 Team Member Actions

<G28> Team Members in Arena – Each Alliance shall have no more than the six designated members (two from each of the three participating Teams) around the Ocean during a Match. Any Alliance with additional team members around the playing field may be assigned a Penalty, and the additional personnel must leave the area before the Match can proceed.

<G29> Team Positions During Autonomous Round – During the Autonomous Period, the drivers must stand inside of the driver station and Human Players must sit or kneel on the ground in the human player zones. Each violation

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(stepping outside the designated area) will result in a Penalty. Exceptions will be made in cases involving personal or operator console safety, and where accessibility needs dictate.

<G30> Team Positions During Teleoperated Round – During the Teleoperated Period, the Drivers and Human Players must stay within their respective player zones. Each incident of stepping out of the designated area will result in a Penalty. Exceptions will be made in cases involving personal or operator console safety.

<G31> Game Piece Interaction – No team member except the Human Player may contact Cannonballs and coins at any time during the Match. Violations will result in a Penalty.

<G32> Game Piece Interaction – The Human Player may only enter Cannonballs into the Ocean with the Cannon and Coins through the Coin Slot. If a Cannonball or Coin enters the Ocean by any other means, the offending Alliance will be penalized.

<G33> Drivers Operating Robots – During a Match, the operator console shall be operated solely by the Driver. Any operation of the operator console other than the designated team member will result in the Robot being disabled and the offending team being disqualified from the Match.

<G34> Outside Communication – No outside electronic communication is permitted with the Driver or Human Player of any team during a Match. This includes but is not limited to, cell phones, 2-way radios, and Bluetooth or other wireless devices.

Explanatory Note: The intent of this rule is to ensure no team gains an unfair advantage by communicating with parents, mentors, coaches, or other students outside the arena area. Communication of any sort that is deemed unfair by the head referee, Game Design Committee, or Tournament Director will not be allowed.

<G35> Respect and Professional Demeanor – Junior Robotics League competitions promote respect and professional demeanor. In the event that any team members around the playing field are uncivil towards competition personnel or other teams, the Team may be disqualified from the Match. This rule applies to Teams at all times while around the playing field(including before, during, and after the match). Teams will not receive match penalties for actions off-Ocean; however, event personnel will hold them accountable for their off-Ocean actions. Any major problems will be resolved by the Tournament Director, and the Tournament Director holds the authority to award any Penalty up to and including ejection of the offending Team or individual from the tournament and expulsion from the premises. This rule also applies to team mentors and coaches, parents, and fans.

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5.3.7 Referee Interactions

<G36> Referee Discussions – Any discussions regarding calls, rules, scores, or penalties related to a specific Match must be between the drivers and the head referee. Coaches and parents may not initiate discussions regarding previously played Matches with the head referee.

<G37> When making a ruling, the head referee may receive input from other sources, particularly Game Design Committee members, and technical staff that may be present at the event. However, **the Head Referee's decision is final.**

<G38> Any conditions of play not specifically covered in these rules will be left to the discretion of the head referee, Game Design Committee, and/or Tournament Directors.