



PRESENTED BY  HAAS
Gene Haas Foundation



Glossary

Term	Definition
ACTIVE DEVICE	any device capable of dynamically controlling and/or converting a source of electrical energy by the application of external electrical stimulus
ALGAE	a 16 in. (41 cm) \pm ½ in. (~12 mm) diameter rubber playground ball.
ALLIANCE	a cooperative of up to 4 <i>FIRST</i> Robotics Competition teams
ALLIANCE AREA	a 18 ft. 1¼ in. wide by 13 ft. 10⅜ in. deep (~552 cm by 423 cm) infinitely tall volume formed by, and including the ALLIANCE WALL, CORAL STATION AREAS, the edge of the carpet, and white colored tape
ALLIANCE CAPTAIN	The designated STUDENT representative from each ALLIANCE Lead
ALLIANCE WALL	separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA
ANCHOR	a collection of surfaces at the top of the CAGE and chain assembly
ARENA	includes all elements of the game infrastructure that are required to play REEFSCAPE SM presented by Haas: the FIELD, SCORING ELEMENTS, queue area, team media area, designated TECHNICIAN area, and all equipment needed for FIELD control, ROBOT control, and scorekeeping
ARENA FAULT	an error in ARENA operation
AUTO	the first 15 seconds of the MATCH, and the FMS blocks any DRIVER control, so ROBOTS operate with only their pre-programmed instructions
BACKUP POOL	the group of teams willing and able to join an ALLIANCE during the Playoff MATCHES, if needed

Term	Definition
BACKUP TEAM	The team whose ROBOT and DRIVE TEAM replaces another ROBOT and DRIVE TEAM on an ALLIANCE during the Playoff MATCHES
BARGE	a 29 ft. 2 in. (889 cm) wide, 3 ft. 8 in. (~112 cm) deep, and 8 ft. 5 in. (~257 cm) tall structure that spans the center of the FIELD
BARGE ZONE	a 3 ft. 10 in. deep by 12 ft. 2½ in. long (~117 cm by 372 cm), infinitely tall, 4-sided volume surrounding the ALLIANCE'S half of the BARGE. It is bounded by and includes the ALLIANCE-colored tape.
BRANCH	angled or compound extensions from the REEF vertical pipes.
BUMPER	a required assembly which attaches to the ROBOT frame. BUMPERS protect ROBOTS from damaging/being damaged by other ROBOTS and FIELD elements.
BUMPER ZONE	a space between 2 ½ in. (~63 mm) and 5 ¾ in. (~146 mm) from the floor.
BYPASSED	a state applied to any ROBOT which is unable or ineligible to participate in that MATCH, as determined by the FTA, LRI, or Head REFEREE
CAGE	2 ft. tall and 7¾ in. wide (outside dimension) (~61 cm tall and ~19 cm wide) rectangular structures suspended from the truss structure in specific locations
CHUTE	55° sloped tunnel that leads to the opening in the CORAL STATION
COACH	a guide or advisor
COMPONENT	any part in its most basic configuration, which cannot be disassembled without damaging or destroying the part or altering its fundamental function
CONTINUOUS	describes durations that are more than approximately 10 seconds
CONTROL	an action by a ROBOT in which a the SCORING ELEMENT is fully supported by or stuck in, on, or under the ROBOT or intentionally pushes a SCORING ELEMENT to a desired location or in a preferred direction (i.e. herding).
CORAL	a 11 ⅞ in. long (~30 cm) piece of 4 in. diameter Schedule 40 Cellular (Foam) Core PVC pipe. CORAL has a 4-in. (~102 mm) inside diameter and a 4½-in. (~11 cm) outside diameter.
CORAL STATION	assembly through which HUMAN PLAYERS feed CORAL into the FIELD
CORAL STATION AREA	a 5 ft. 10⅞ in. wide by 13 ft. 10⅜ in. ft deep (~180 cm by 423 cm) infinitely tall volume bounded by the CORAL STATION, edge of carpet, and ALLIANCE and white colored tape

Term	Definition
CORAL MARK	1 of 6 4 in. by 4 in. (~102 mm by 102 mm) “+” marks used to identify placement of CORAL before the MATCH. Marks are made with black tape.
COTS	a standard (i.e. not custom order) part commonly available from a VENDOR for all teams for purchase
CUSTOM CIRCUIT	Any active electrical item that is not an actuator (specified in R501) or core control system item (specified in R710)
DISABLED	the state in which a ROBOT is commanded to deactivate all outputs, rendering the ROBOT inoperable for the remainder of the MATCH
DISQUALIFIED	the state of a team in which they receive 0 MATCH points and 0 Ranking Points in a Qualification MATCH or causes their ALLIANCE to receive 0 MATCH points in a Playoff MATCH
DRIVE TEAM	a set of up to 5 people from the same <i>FIRST</i> Robotics Competition team responsible for team performance for a specific MATCH
DRIVER	an operator and controller of the ROBOT
DRIVER STATION	1 of 3 assemblies within an ALLIANCE WALL behind which a DRIVE TEAM operates their ROBOT
FABRICATED ITEM	any COMPONENT or MECHANISM that has been altered, built, cast, constructed, concocted, created, cut, heat treated, machined, manufactured, modified, painted, produced, surface coated, or conjured partially or completely into the final form in which it will be used on the ROBOT
FIELD	an approximately 26 ft. 5 in. (~805 cm) by 57 ft. 6 ⁷ / ₈ in. (~1 755 cm) carpeted area bounded by inward facing surfaces of the ALLIANCE WALLS, CORAL STATIONS, PROCESSORS and PROCESSOR openings, and guardrails
FIELD STAFF	the collective group of people working on or near the FIELD responsible for making sure the MATCHES are cycled through efficiently, fairly, safely, and with a spirit of cooperation, Gracious Professionalism, and generosity of spirit
FMS	the FIELD Management System
FTA	<i>FIRST</i> Technical Advisor
HUMAN PLAYER	a SCORING ELEMENT manager
HUMAN STARTING LINE	a white line spanning the ALLIANCE AREA between the CORAL STATION AREAS that is parallel to and located 2 ft. (~61 cm) from the bottom square tube of the ALLIANCE WALL to the near edge of the tape.
INSPECTOR	a person determined by <i>FIRST</i> to accurately and efficiently assess the legality of a given part of a ROBOT

Term	Definition
KOP	the Kit of Parts (KOP)
LINEUP	the 3 teams participating in the MATCH and their selected DRIVER STATIONS
LEAVE	a scoring accomplishment in which a ROBOT must move such that its BUMPERS no longer overlap its ROBOT STARTING LINE at the end of
LRI	the Lead ROBOT INSPECTOR
MAJOR FOUL	a credit of 6 points towards the opponent's MATCH point total
MAJOR MECHANISM	a group of COMPONENTS and/or MECHANISMS assembled together to address at least 1 game challenge: ROBOT movement, SCORING ELEMENT manipulation, FIELD element manipulation, or performance of a scorable task without the assistance of another ROBOT.
MATCH	the 2-minute and 30-second in which a ROBOT is enabled to play REEFSCAPE
MECHANISM	an assembly of COMPONENTS that provide specific functionality on the ROBOT. A MECHANISM can be disassembled (and then reassembled) into individual COMPONENTS without damage to the parts.
MINOR FOUL	a credit of 2 points towards the opponent's MATCH point total
MOMENTARY	describes durations that are fewer than approximately 3 seconds
MXP	myRIO Expansion port, the expansion port on the roboRIO
NET	a goal in which an ALLIANCE scores ALGAE
OPERATOR CONSOLE	the set of COMPONENTS and MECHANISMS used by the DRIVERS and/or HUMAN PLAYERS to relay commands to the ROBOT
PARK	a state in which a ROBOT'S BUMPERS must be partially or completely contained in their BARGE ZONE at the end of the MATCH
PASSIVE CONDUCTOR	any device or circuit whose capability is limited to the conduction and/or static regulation of the electrical energy applied to it (e.g. wire, splices, connectors, printed wiring board, etc.)
PROCESSOR	A goal with a rectangular opening through which ROBOTS score ALGAE which is 2 ft. 4 in. wide (~71 cm), 1 ft. 8 in. tall (~51 cm), and 7 in. (~18 cm) from the carpet
PROCESSOR AREA	a 3 ft. 7 ³ / ₈ in. wide by 7 ft. 6 in. deep (~110 cm by 229 cm) infinitely tall volume formed by, and including, the ALLIANCE colored tape, guardrail, and the PROCESSOR wall.

Term	Definition
PCM	Pneumatics Control Module
PDH	Power Distribution Hub
PDP	Power Distribution Panel
PH	Pneumatic Hub
PIN	an action by a ROBOT that is preventing the movement of an opponent ROBOT by contact, either direct or transitive (such as against a FIELD element)
RED CARD	a penalty assessed for egregious ROBOT or team member behavior or rule violations which results in a team being DISQUALIFIED for the MATCH.
REEF	1 of 2 5 ft. 5 ½ in. (~166 cm) hexagonal structures with BRANCHES that extend from each side where CORAL are scored
REEF ZONE	an infinitely tall 6-sided, 7 ft. 9½ in. wide (face to face) (~237 cm), volume surrounding the ALLIANCE'S REEF. It is bounded by and includes the ALLIANCE-colored tape.
REFEREE	an official who is certified by <i>FIRST</i> to enforce the rules of REEFSCAPE
REPEATED	describes actions that happen more than once within a MATCH
ROBOT	an electromechanical assembly built by the <i>FIRST</i> Robotics Competition team to play the current season's game and includes all the basic systems required to be an active participant in the game –power, communications, control, BUMPERS, and movement about the FIELD
ROBOT PERIMETER	the part of a ROBOT contained within the BUMPER ZONE and established while in the ROBOT'S STARTING CONFIGURATION, that is comprised of fixed, non-articulated structural elements of the ROBOT
ROBOT STARTING LINE	a black line that spans the width of the FIELD between each REEF and the BARGE. It is positioned such that it is 7 ft. 4 in. (~224 cm) from the REEF.
RP	Ranking Points
RPM	Radio Power Module
RS	Ranking Score
RSL	ROBOT Signal Light
SCORING ELEMENT	a CORAL or an ALGAE
SIGNAL LEVEL	a term used to characterize circuits which draw $\leq 1A$ continuous and have a source incapable of delivering $>1A$, including but not limited to roboRIO non-PWM outputs, CAN signals, PCM/PH

Term	Definition
	Solenoid outputs, VRM 500mA outputs, RPM outputs, and Arduino outputs
STARTING CONFIGURATION	the physical configuration in which a ROBOT starts a MATCH
STUDENT	a person who has not completed high-school, secondary school, or the comparable level as of September 1 prior to Kickoff
SURROGATE	a team randomly assigned by the FMS to play an extra Qualification MATCH
TECHNICIAN	a resource for ROBOT troubleshooting, setup, and removal from the FIELD
TELEOP	the Teleoperated Period
VENDOR	a legitimate business source for COTS items that satisfies criteria defined in Section 8 ROBOT Construction Rules
VERBAL WARNING	a warning issued by event staff or the Head REFEREE. VERBAL WARNING warnings issued by the Head REFEREE are logged
VRM	Voltage Regulator Module
YELLOW CARD	a warning issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations

