

## 15 Glossary

Term	Definition
<b>ACTIVE DEVICE</b>	any device capable of dynamically controlling and/or converting a source of electrical energy by the application of external electrical stimulus
<b>ALLIANCE</b>	a cooperative of up to 4 <i>FIRST</i> Robotics Competition teams
<b>ALLIANCE AREA</b>	an approximately 360in wide by 134in deep (~9.14m by 3.4m) infinitely tall volume formed by, and including the ALLIANCE WALL, OUTPOST, TOWER WALL, the edge of the carpet, and ALLIANCE colored tape
<b>ALLIANCE CAPTAIN</b>	The designated STUDENT representative from each ALLIANCE Lead
<b>ALLIANCE SHIFT</b>	One of four SHIFTS (SHIFT 1, SHIFT 2, SHIFT 3, and SHIFT 4) during the TELEOP Period
<b>ALLIANCE WALL</b>	A FIELD structure that separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA
<b>ALLIANCE ZONE</b>	A 158.6in deep by 317.7in long (~4.03m by 8.07m), infinitely tall volume formed by an ALLIANCE WALL, TOWER WALL, and guardrails
<b>ARENA</b>	includes all elements of the game infrastructure that are required to play REBUILT™ presented by Haas: the FIELD, SCORING ELEMENTS, queue area, team media area (when available), designated TECHNICIAN area, and all equipment needed for FIELD control, ROBOT control, and scorekeeping
<b>ARENA FAULT</b>	an error in ARENA operation
<b>AUTO</b>	the first 20 seconds of the MATCH, and the FMS blocks any DRIVER control, so ROBOTS operate with only their pre-programmed instructions
<b>BACKUP POOL</b>	the group of teams willing and able to join an ALLIANCE during the Playoff MATCHES
<b>BACKUP TEAM</b>	The team whose ROBOT and DRIVE TEAM replaces another ROBOT and DRIVE TEAM on an ALLIANCE during the Playoff MATCHES
<b>BUMP</b>	73.0in (1.854m) wide, 44.4in (1.128m) deep, and 6.513in (16.54cm) tall structures on either side of the HUB that ROBOTS drive over
<b>BUMPER</b>	a required assembly which attaches to the ROBOT frame. BUMPERS protect ROBOTS from damaging/being damaged by other ROBOTS and FIELD elements.
<b>BUMPER ZONE</b>	a space between 2.5in (6.35cm) and 5.75in (14.61cm) from the floor.
<b>BYPASSED</b>	any ROBOT which is unable or ineligible to participate in that MATCH, as determined by the FTA, LRI, or Head REFEREE

<b>CENTER LINE</b>	a white line that spans the width of the FIELD that bisects the NEUTRAL ZONE in half
<b>CHUTE</b>	15.0° sloped tunnel that leads to the upper opening in the
<b>CHUTE DOOR</b>	an HDPE arm on a pivot that can be rotated approximately 90 degrees by the HUMAN PLAYER to open or close the CHUTE
<b>COMPONENT</b>	any part in its most basic configuration, which cannot be disassembled without damaging or destroying the part or altering its fundamental function
<b>CONTINUOUS</b>	describes durations that are more than approximately 10 seconds
<b>CONTROL</b>	an action by a ROBOT in which a SCORING ELEMENT is fully supported by or stuck in, on, or under the ROBOT
<b>CORRAL</b>	8.13in (20.6cm) tall polycarbonate panels that create a 35.8in (90.8cm) wide, 37.6in (95.5cm) deep area on the floor in which FUEL can be stored
<b>COTS</b>	a standard (i.e. not custom order) part commonly available from a VENDOR for all teams for purchase
<b>CUSTOM CIRCUIT</b>	Any active electrical item that is not an actuator (specified in <a href="#">R501</a> ) or core control system item (specified in <a href="#">R710</a> )
<b>DEPOT</b>	a 42.0in (1.07m) wide, 27.0in (68.6cm) deep structure located along the ALLIANCE WALL
<b>DISABLED</b>	the state in which a ROBOT is commanded to deactivate all outputs, rendering the ROBOT inoperable for the remainder of the MATCH
<b>DISQUALIFIED</b>	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
<b>DRIVE COACH</b>	a guide or advisor
<b>DRIVE TEAM</b>	a set of up to 5 people from the same FIRST Robotics Competition team responsible for team performance for a specific MATCH
<b>DRIVER</b>	an operator and controller of the ROBOT
<b>DRIVER STATION</b>	1 of 3 assemblies within an ALLIANCE WALL behind which a DRIVE TEAM operates their ROBOT
<b>END GAME</b>	SHIFT during the TELEOP Period where where both HUBS return to active.
<b>ENERGIZED RP</b>	BONUS RP earned when the amount of FUEL scored in the HUB is at or above threshold
<b>FABRICATED ITEM</b>	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
<b>FIELD</b>	an approximately 317.7in (~8.07m) by 651.2in (~16.54m) carpeted area bounded by inward facing surfaces of the ALLIANCE WALLS, OUTPOSTS, TOWER WALLS, and guardrails
<b>FIELD STAFF</b>	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
<b>FMS</b>	the FIELD Management System
<b>FTA</b>	<i>FIRST</i> Technical Advisor
<b>FUEL</b>	a 5.91in (15.0cm) diameter, high density foam ball
<b>HIGH RUNG</b>	A RUNG 63.0in (1.6m) from the floor
<b>HUB</b>	one of two 47in by 47in (~1.19m by 1.19m) rectangular prism structures with an extended opening at the top surface
<b>HUMAN PLAYER</b>	a SCORING ELEMENT manager
<b>HUMAN STARTING LINE</b>	a white line spanning the ALLIANCE AREA up to the OUTPOST AREA a white line spanning the ALLIANCE AREA up to the OUTPOST AREA
<b>INSPECTOR</b>	a person determined by <i>FIRST</i> to accurately and efficiently assess the legality of a given part of a ROBOT
<b>KOP</b>	the Kit of Parts
<b>LINEUP</b>	the 3 teams participating in the MATCH and their selected DRIVER STATIONS
<b>LEVEL</b>	Criteria required to qualify for TOWER points
<b>LOW RUNG</b>	A RUNG located 27.0in (68.58cm) from the floor
<b>LRI</b>	the Lead ROBOT INSPECTOR
<b>MAJOR FOUL</b>	a credit of 15 points towards the opponent's MATCH point total
<b>MAJOR MECHANISM</b>	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.
<b>MATCH</b>	the 2-minute and 40-second in which a ROBOT is enabled to play REBUILT
<b>MECHANISM</b>	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.
<b>MID RUNG</b>	A RUNG located 45.0in (114.3cm) from the floor

<b>MINOR FOUL</b>	a credit of 5 points towards the opponent's MATCH point total
<b>MOMENTARY</b>	describes durations that are fewer than approximately 3 seconds
<b>MXP</b>	myRIO Expansion port, the expansion port on the roboRIO
<b>NEUTRAL ZONE</b>	A 283in deep by 317.7in long (7.19m by 8.07m), infinitely tall volume formed by the BUMPS, TRENCHES, HUBS, and guardrails
<b>OPERATOR CONSOLE</b>	the set of COMPONENTS and MECHANISMS used by the DRIVERS and/or HUMAN PLAYERS to relay commands to the ROBOT
<b>OUTPOST</b>	an assembly through which HUMAN PLAYERS feed FUEL into the FIELD and ROBOTS can deliver FUEL to their HUMAN PLAYERS
<b>OUTPOST AREA</b>	a 71.0in wide by 134in deep (1.8m by 3.4m) infinitely tall volume bounded by the OUTPOST, edge of carpet, and ALLIANCE and white colored tape
<b>PASSIVE CONDUCTOR</b>	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.)
<b>PCM</b>	Pneumatic Control Module
<b>PDH</b>	Power Distribution Hub
<b>PDP</b>	Power Distribution Panel
<b>PH</b>	Pneumatic Hub
<b>PIN</b>	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)
<b>RED CARD</b>	issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations which results in a team being DISQUALIFIED for the MATCH.
<b>REFEREE</b>	an official who is certified by <i>FIRST</i> to enforce the rules of REBUILT
<b>REPEATED</b>	describes actions that happen more than once within a MATCH
<b>ROBOT</b>	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
<b>ROBOT PERIMETER</b>	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
<b>ROBOT STARTING LINE</b>	an ALLIANCE colored line that spans the width of the FIELD at the edge of an ALLIANCE'S BASE in front of two BARRIERS and an ALLIANCE HUB
<b>RP</b>	Ranking Points

<b>RPM</b>	Radio Power Module
<b>RS</b>	Ranking Score
<b>RSL</b>	ROBOT Signal Light
<b>RUNG</b>	One of the 1-1/4in Sch 40 (1.66in (4.216cm) OD) pipeis centered between the UPRIGHT and extend 5.875in (14.92cm) from the outer face of the UPRIGHT on either sides located on the TOWER
<b>SCORING ELEMENT</b>	a FUEL
<b>SHIFT</b>	see ALLIANCE SHIFT, TRANSITION SHIFT
<b>SIGNAL LEVEL</b>	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 Solenoid outputs, VRM 500mA outputs, RPM outputs, and Arduino outputs
<b>STARTING CONFIGURATION</b>	the physical configuration in which a ROBOT starts a MATCH
<b>STUDENT</b>	a person who has not completed high-school, secondary school, or the comparable level as of September 1 prior to Kickoff
<b>SUPERCHARGED RP</b>	BONUS RP earned when the amount of FUEL scored in the HUB is at or above threshold
<b>SURROGATE</b>	a team randomly assigned by the FMS to play an extra Qualification MATCH
<b>TECHNICIAN</b>	a resource for ROBOT troubleshooting, setup, and removal from the FIELD
<b>TELEOP</b>	the Teleoperated Period
<b>TOWER</b>	a 49.25in (1.251m) wide, 45.0in (1.143m) deep, and 78.25in (1.988m) tall structure made up of the TOWER WALL, TOWER BASE, UPRIGHTS, RUNGS and supporting structures
<b>TOWER BASE</b>	a 39.0in (99.06cm) wide by 45.18in (1.148m) deep plate that sits on the floor and extends from the TOWER WALL
<b>TOWER WALL</b>	Part of the TOWER integrated into each ALLIANCE WALL
<b>TRANSITION SHIFT</b>	Segment of TELEOP prior to the ALLIANCE SHIFTS
<b>TRAVERSAL RP</b>	BONUS RP earned when the amount of TOWER points scored during the MATCH is at or above threshold
<b>TRENCH</b>	are a 65.65in (1.668m) wide, 47.0in (1.194m) deep, and 40.25in (1.022m) tall structure that ROBOTS drive underneath
<b>UPRIGHTS</b>	72.1in (1.831m) tall, 1.5in (3.81cm) thick, 3.5in (8.89cm) deep sheet metal box frames that extend vertically up from the TOWER BASE

<b>VENDOR</b>	a legitimate business source for COTS items that satisfies criteria defined in <a href="#">Section 8 ROBOT Construction Rules</a>
<b>VERBAL WARNING</b>	a warning issued by event staff or the Head REFEREE.
<b>VRM</b>	Voltage Regulator Module
<b>YELLOW CARD</b>	issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations

