

15 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
ALLIANCE	a cooperative of up to 4 FIRST Robotics Competition teams
ALLIANCE AREA	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
ALLIANCE CAPTAIN	The designated STUDENT representative from each ALLIANCE Lead
ALLIANCE SHIFT	One of four SHIFTS (SHIFT 1, SHIFT 2, SHIFT 3, and SHIFT 4) during the TELEOP Period
ALLIANCE WALL	A FIELD structure that separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA
ALLIANCE ZONE	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
ARENA	includes all elements of the game infrastructure that are required to play REBUILTTM 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
ARENA FAULT	an error in ARENA operation
AUTO	the first 20 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
BACKUP TEAM	The team whose ROBOT and DRIVE TEAM replaces another ROBOT and DRIVE TEAM on an ALLIANCE during the Playoff MATCHES
BUMP	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
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 2.5in (6.35cm) and 5.75in (14.61cm) from the floor.
BYPASSED	any ROBOT which is unable or ineligible to participate in that MATCH, as determined by the FTA, LRI, or Head REFEREE

CENTER LINE	a white line that spans the width of the FIELD that bisects the NEUTRAL ZONE in half
CHUTE	15.0° sloped tunnel that leads to the upper opening in the
CHUTE DOOR	an HDPE arm on a pivot that can be rotated approximately 90 degrees by the HUMAN PLAYER to open or close the CHUTE
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 SCORING ELEMENT is fully supported by or stuck in, on, or under the ROBOT
CORRAL	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
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)
DEPOT	a 42.0in (1.07m) wide, 27.0in (68.6cm) deep structure located along the ALLIANCE WALL
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 COACH	a guide or advisor
DRIVE TEAM	a set of up to 5 people from the same FIRST 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
END GAME	SHIFT during the TELEOP Period where both HUBS return to active.
ENERGIZED RP	BONUS RP earned when the amount of FUEL scored in the HUB is at or above threshold
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 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
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
FUEL	a 5.91in (15.0cm) diameter, high density foam ball
HIGH RUNG	A RUNG 63.0in (1.6m) from the floor
HUB	one of two 47in by 47in (~1.19m by 1.19m) rectangular prism structures with an extended opening at the top surface
HUMAN PLAYER	a SCORING ELEMENT manager
HUMAN STARTING LINE	a white line spanning the ALLIANCE AREA up to the OUTPOST AREA a white line spanning the ALLIANCE AREA up to the OUTPOST AREA
INSPECTOR	a person determined by <i>FIRST</i> to accurately and efficiently assess the legality of a given part of a ROBOT
KOP	the Kit of Parts
LINEUP	the 3 teams participating in the MATCH and their selected DRIVER STATIONS
LEVEL	Criteria required to qualify for TOWER points
LOW RUNG	A RUNG located 27.0in (68.58cm) from the floor
LRI	the Lead ROBOT INSPECTOR
MAJOR FOUL	a credit of 15 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 40-second in which a ROBOT is enabled to play REBUILT
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.
MID RUNG	A RUNG located 45.0in (114.3cm) from the floor

MINOR FOUL	a credit of 5 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
NEUTRAL ZONE	A 283in deep by 317.7in long (7.19m by 8.07m), infinitely tall volume formed by the BUMPS, TRENCHES, HUBS, and guardrails
OPERATOR CONSOLE	the set of COMPONENTS and MECHANISMS used by the DRIVERS and/or HUMAN PLAYERS to relay commands to the ROBOT
OUTPOST	an assembly through which HUMAN PLAYERS feed FUEL into the FIELD and ROBOTS can deliver FUEL to their HUMAN PLAYERS
OUTPOST AREA	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
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.)
PCM	Pneumatic 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	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.
REFEREE	an official who is certified by FIRST to enforce the rules of REBUILT
REPEATED	describes actions that happen more than once within a MATCH
ROBOT	an electromechanical assembly built by the FIRST 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	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
RP	Ranking Points

RPM	Radio Power Module
RS	Ranking Score
RSL	ROBOT Signal Light
RUNG	One of the 1-1/4in Sch 40 (1.66in (4.216cm) OD) pipes centered between the UPRIGHT and extend 5.875in (14.92cm) from the outer face of the UPRIGHT on either sides located on the TOWER
SCORING ELEMENT	a FUEL
SHIFT	see ALLIANCE SHIFT, TRANSITION SHIFT
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 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
SUPERCHARGED RP	BONUS RP earned when the amount of FUEL scored in the HUB is at or above threshold
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
TOWER	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
TOWER BASE	a 39.0in (99.06cm) wide by 45.18in (1.148m) deep plate that sits on the floor and extends from the TOWER WALL
TOWER WALL	Part of the TOWER integrated into each ALLIANCE WALL
TRANSITION SHIFT	Segment of TELEOP prior to the ALLIANCE SHIFTS
TRAVERSAL RP	BONUS RP earned when the amount of TOWER points scored during the MATCH is at or above threshold
TRENCH	are a 65.65in (1.668m) wide, 47.0in (1.194m) deep, and 40.25in (1.022m) tall structure that ROBOTS drive underneath
UPRIGHTS	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

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.
VRM	Voltage Regulator Module
YELLOW CARD	issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations

