

## 12 GLOSSARY

Term	Definition
<b>ACTIVATION BONUS</b>	At least 26 total CHARGE STATION points earned in AUTO and/or ENDGAME
<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 FIRST Robotics Competition teams
<b>ALLIANCE CAPTAIN</b>	The designated STUDENT representative from each ALLIANCE Lead
<b>ALLIANCE AREA</b>	a 20 ft. (~609 cm) wide by 9 ft. 10¼ in. (~300 cm) deep infinitely tall volume formed by, and including the ALLIANCE WALL, the edge of the carpet, and ALLIANCE colored tape
<b>ALLIANCE WALL</b>	an ARENA element that separates ROBOTS from DRIVE TEAM members in the ALLIANCE AREA. It consists of 3 DRIVER STATIONS.
<b>ARENA</b>	a space which includes all elements of the game infrastructure that are required to play CHARGED UP <sup>SM</sup> presented by Haas: the FIELD, GAME PIECES, 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 phase of each MATCH is 15 seconds long and called the Autonomous Period (AUTO). During AUTO, ROBOTS operate without any DRIVE TEAM control or input
<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>BACKUP POOL</b>	the group of teams willing and able to join an ALLIANCE during the Playoff MATCHES, if needed, until up to 8 teams accept
<b>BARRIER</b>	a 7 ft. 4 in. (~224 cm) long assembly that separates each COMMUNITY from its adjacent LOADING ZONE
<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>	the volume contained between the floor and a virtual horizontal plane 7½ in. (~19 cm) above the floor in reference to the ROBOT standing normally on a flat floor
<b>BYPASSED</b>	the state assigned to 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 tape line that bisects the length of the FIELD.

Term	Definition
<b>CHARGE STATION</b>	an 8 ft. 1¼ in. (~247 cm) wide, 6 ft. 4⅞ in. (~193 cm) deep structure that is located in each COMMUNITY such that its center is 8 ft. 2⅝ in. (~251 cm) from the far edge of the GRID'S tape line and centered in the width of the COMMUNITY
<b>COACH</b>	a guide or advisor
<b>COMMUNITY</b>	an 18 ft. (~549 cm) wide by 11 ft. ⅜ in. (~336 cm) to 16 ft. 1¼ in. (~491 cm) deep infinitely tall volume formed by the ALLIANCE WALL, the plane defined by the BARRIER plastic, ALLIANCE colored tape, and the guardrail. an 18 ft. (~549 cm) wide by 11 ft. ⅜ in. (~336 cm) to 16 ft. 1¼ in. (~491 cm) deep infinitely tall volume formed by the ALLIANCE WALL, the plane defined by the BARRIER plastic, ALLIANCE colored tape, and the guardrail. an 18 ft. (~549 cm) wide by 11 ft. ⅜ in. (~336 cm) to 16 ft. 1¼ in. (~491 cm) deep infinitely tall volume formed by the ALLIANCE WALL, the plane defined by the BARRIER plastic, ALLIANCE colored tape, and the guardrail.
<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 rule violations that happen for more than approximately 10 seconds
<b>CONTROL</b>	the state of a GAME PIECES if any of the following are true: A. the GAME PIECE is fully supported by the ROBOT, or B. the ROBOT is intentionally moving a GAME PIECE to a desired location or in a preferred direction
<b>CONE</b>	a yellow 1 ft. 13/16 in. (~33 cm) tall rubber marker cone
<b>CONE NODE</b>	a 1¼ in. Schedule 40 (1.66 in. (~4 cm) outer diameter) aluminum pipe with a plug installed in the top
<b>COOPERTITION BONUS</b>	At least 3 GAME PIECES scored on each ALLIANCE'S CO-OP GRID
<b>COTS</b>	an adjective that describes 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 R501) or core control system item (specified in R710)
<b>CUBE</b>	cube-like shape, inflated to 9 ½ in. (~24 cm) +/- ¼ in. (~6 mm) as measured from face to face
<b>CUBE NODE</b>	a polycarbonate shelf that is 1 ft. 6¼ in. (~46 cm) wide and 1 ft. 5 in. (~43 cm) deep.
<b>DISABLED</b>	the state in which a ROBOT is commanded to deactivate all outputs, rendering the ROBOT inoperable

Term	Definition
<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>DOCKED</b>	The state of the ROBOT if it is contacting only the CHARGE STATION and/or other items also directly or transitively fully supported by the CHARGE STATION.
<b>DOUBLE SUBSTATION</b>	A SUBSTATION in-line with their opponent's ALLIANCE WALL.
<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>DRIVE TEAM</b>	a set of up to 5 people from the same <i>FIRST</i> Robotics Competition team responsible for team performance for a specific MATCH
<b>ENGAGED</b>	The state of the ROBOT if the following are true: A. the CHARGE STATION is LEVEL, and B. all ALLIANCE ROBOTS contacting the CHARGE STATION are DOCKED.
<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 26 ft. 3½ in. (~802 cm) by 54 ft. 3¼ in. (~1654 cm) carpeted area bound by and including the inward- and upward-facing surfaces of the guardrails, inward-facing surfaces of the ALLIANCE WALLS, inward-facing surfaces of the SINGLE SUBSTATION (excluding the PORTALS), and the outermost vertical and diagonal polycarbonate surfaces of the DOUBLE SUBSTATION (excluding the PORTALS)
<b>FIELD STAFF</b>	REFEREES, FTAs, or other staff working around the FIELD
<b>FMS</b>	all electronics responsible for sensing and controlling the <i>FIRST</i> Robotics Competition FIELD
<b>FOUL</b>	a credit of 5 points towards the opponent's MATCH point total
<b>FRAME PERIMETER</b>	fixed, non-articulated structural elements of the ROBOT contained within the BUMPER ZONE
<b>FTA</b>	a <i>FIRST</i> Technical Advisor
<b>GAME PIECES</b>	CONES and CUBES
<b>GRID</b>	a 3 ft. 10 in. (~117 cm) tall, 4 ft. 6¼ in. (~138 cm) deep assembly that includes the ALLIANCE colored tape line

Term	Definition
<b>HUMAN PLAYER</b>	a GAME PIECE manager
<b>HYBRID NODE</b>	1 ft. 4 in. (~41 cm) deep carpeted surface contained within the GRID.
<b>INSPECTOR</b>	a volunteer employed to accurately and efficiently assess the legality of a given part or ROBOT
<b>KOP</b>	Kit of Parts, the collection of items listed on the current season's Kickoff Kit Checklists, distributed to the team via <i>FIRST</i> Choice in the current season, or paid for completely (except shipping) with a Product Donation Voucher (PDV) from the current season
<b>LEVEL</b>	A CHARGE STATION within approximately 2½° of parallel to FIELD carpet
<b>LINEUP</b>	the list of the 3 teams participating in the MATCH and their selected DRIVER STATIONS
<b>LINK</b>	3 adjacent NODES in a ROW contains a scored GAME PIECE
<b>LOADING ZONE</b>	an 8 ft. 3 in. (~252 cm) wide by 11 ft. ¼ in. (~336 cm) to 22 ft. ¼ in. (~671 cm) deep infinitely tall volume formed by the DOUBLE SUBSTATION, the plane defined by the BARRIER plastic, the guardrail, and ALLIANCE colored tape. The LOADING ZONE includes the tape.
<b>LRI</b>	a Lead ROBOT INSPECTOR
<b>MAJOR MECHANISM</b>	a group of COMPONENTS and/or MECHANISMS assembled together to address at least 1 game challenge: ROBOT movement, GAME PIECES manipulation, FIELD element manipulation, or performance of a scorable task without the assistance of another ROBOT
<b>MATCH</b>	a two minute and 30 second period of time in which ALLIANCES play CHARGED UP
<b>MECHANISM</b>	an assembly of COMPONENTS that provide specific functionality on the ROBOT
<b>MOBILITY</b>	The award given to a ROBOT whose BUMPERS have completely left its COMMUNITY at any point during AUTO
<b>MOMENTARY</b>	describes rule violations that happen for fewer than approximately 3 seconds
<b>MPX</b>	myRIO Expansion port, the expansion port on the roboRIO
<b>NODE</b>	1 of 9 GAME PIECE scoring locations within a GRID
<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>PARK</b>	the state of a ROBOT whose BUMPERS are completely contained within its COMMUNITY but does not meet the criteria for DOCKED

Term	Definition
<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>PH</b>	a Pneumatic Hub
<b>PCM</b>	a Pneumatic Control Module
<b>PDH</b>	a Power Distribution Hub
<b>PDP</b>	a Power Distribution Panel
<b>PIN</b>	the act in which a ROBOT is preventing the movement of an opponent ROBOT by contact, either direct or transitive (such as against a FIELD element)
<b>PORTAL</b>	a three-dimensional volume through which humans transfer GAME PIECES to ROBOTS or the FIELD
<b>RED CARD</b>	a penalty assessed 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 CHARGED UP
<b>REPEATED</b>	describes rule violations 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>ROW</b>	a series of 9 horizontally adjacent NODES where GAME PIECES can be scored for a common number of points
<b>RP</b>	a Ranking Point
<b>RPM</b>	a Radio Power Module
<b>RS</b>	the Ranking Score
<b>RSL</b>	a ROBOT Signal Light
<b>SIGNAL LEVEL</b>	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>STAGING MARK</b>	1 of 8 marks used to identify starting locations for GAME PIECES
<b>STARTING CONFIGURATION</b>	the physical configuration in which a ROBOT starts a MATCH

Term	Definition
<b>STARTING LINE</b>	a white tape line spanning the ALLIANCE AREA and SUBSTATION AREA located 2 ft. 4 in. (~71 cm) from the face of THE ALLIANCE WALL to the near edge of the tape.
<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>SINGLE SUBSTATION</b>	a SUBSTATION in-line with the guardrail.
<b>SUBSTATION</b>	an assembly used to move GAME PIECES from humans to ROBOTS or onto the FIELD. There are 2 types of SUBSTATIONS in each SUBSTATION AREA: a SINGLE SUBSTATION and a DOUBLE SUBSTATION.
<b>SURROGATE</b>	a team randomly assigned by the FIELD Management System to play an extra Qualification MATCH
<b>SUSTAINABILITY BONUS</b>	At least 5 LINKS scored.
<b>TECH FOUL</b>	a credit of 12 points toward the opponent's MATCH point total
<b>TECHNICIAN</b>	a resource for ROBOT troubleshooting, setup, and removal from the FIELD
<b>TELEOP</b>	The second phase of each MATCH lasting two minutes and fifteen seconds (2:15) during which DRIVERS remotely operate ROBOTS to retrieve and score GAME PIECES
<b>VENDOR</b>	a legitimate business source for COTS items that satisfies all criteria listed in Section 9
<b>VRM</b>	a Voltage Regulator Module
<b>YELLOW CARD</b>	a warning issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations. A subsequent YELLOW CARD within the same tournament phase results in a RED CARD



FIRST®, the FIRST® logo, FIRST® Robotics Competition, FIRST® Tech Challenge, CHARGED UP<sup>SM</sup>, FIRST ENERGIZE<sup>SM</sup>, Gracious Professionalism®, and Coopertition® are trademarks of For Inspiration and Recognition of Science and Technology (FIRST). LEGO® is a trademark of the LEGO Group. FIRST® LEGO® League is a jointly held trademark of FIRST and the LEGO Group. All other trademarks are the property of their respective owners. ©2023 FIRST. All rights reserved.