

16 Glossary

The following definitions and terms are used for the *FIRST* Tech Challenge game DECODE. Defined terms are in ALL CAPITAL LETTERS throughout the manual (for example, ALLIANCE). Competition rules mean what they plainly say. If a word is not given a game definition, then you should use its common conversational meaning.

Term	Definition
ALLIANCE	a cooperative of 2 <i>FIRST</i> Tech Challenge teams
ALLIANCE AREA	a 96 in. (243.85 cm) wide by 54 in. (137.15 cm) deep by infinitely tall volume formed by placing ALLIANCE colored tape onto the flooring surface outside of the FIELD.
ALLIANCE CAPTAIN	The designated STUDENT representative from each ALLIANCE lead is called the ALLIANCE CAPTAIN.
ARENA	includes all elements of the game infrastructure that are required to play this season's FTC game including: the FIELD, SCORING ELEMENTS, queue area, team media area, and all equipment needed for FIELD control, ROBOT control, and scorekeeping
ARENA FAULT	ARENA FAULT is an error in ARENA operation
ARTIFACT	An ARTIFACT is a 5 in. (12.70 cm) nominal Gopher ResisDent™ polypropylene ball ALLIANCE neutral SCORING ELEMENT.
AUTO	the first 30 seconds of the MATCH, during which DRIVERS may not provide input to their ROBOTS, so ROBOTS operate with only their pre-programmed instructions
BASE	A scoring accomplishment in which ROBOT must be either fully returned or partially returned to their BASE ZONE.
BASE ZONE	an 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) wide by 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) deep infinitely tall volume bounded by ALLIANCE colored tape
CHASSIS	ROBOT'S MAJOR MECHANISM that enables it to move around a FIELD
CLASSIFIED	An ARTIFACT that passes through the SQUARE and transitions directly to the RAMP
CLASSIFIER	a structure attached to the GOAL which has 3 main components: the SQUARE, RAMP, and GATE
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

Term	Definition
CONTROL	<p>an action by a ROBOT in which the SCORING ELEMENT is fully supported by or stuck in, on, or under the ROBOT or it intentionally pushes a SCORING ELEMENT to a desired location or in a preferred direction (i.e., herding). CONTROL requires contact with a ROBOT, either directly or transitively through other SCORING ELEMENTS. Typically, CONTROL requires one of the following to be true:</p> <ul style="list-style-type: none"> A. The SCORING ELEMENT is fully supported by the ROBOT B. The ROBOT is moving the SCORING ELEMENT in a preferred direction with a flat or concave face of the ROBOT
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 power regulation device (specified in R505)
DEPOT	the white tape approximately 30 in. (76.20 cm) long which spans the entire length of the GOAL front face and is located at the base of the GOAL
DISABLED	The REFEREE instructs the team to stop the ROBOT which will 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 4 people from the same FIRST Tech Challenge team responsible for team performance for a specific MATCH
DRIVER	an operator and controller of the ROBOT
DRIVER STATION	Android device (smartphone or REV Driver Hub) that runs the DRIVER STATION App software to communicate with a ROBOT per R901
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 144 in. by 144 in. (365.75 cm by 365.75 cm) area bounded by the inside surface of the walls
FIELD STAFF	volunteers present in and around the ARENA that are responsible for making sure the MATCHES are cycled through efficiently, fairly, safely, and with a spirit of cooperation, <i>Gracious Professionalism</i> ®, and generosity of spirit
FTA	FIRST Technical Advisor

Term	Definition
GATE	an ALLIANCE specific FIELD element that prevents CLASSIFIED ARTIFACTS from exiting the RAMP
GATE ZONE	a 2.75 in. (7.00 cm) wide by 10 in. (25.40 cm) long infinitely tall volume bounded by 2 parallel 10 in. (25.40 cm) long ALLIANCE colored tape segments adjacent to each GATE
GOAL	a 3-sided structure with a horizontal triangular shaped opening at the top
HUMAN PLAYER	a SCORING ELEMENT manager
INSPECTOR	a person determined by FIRST to accurately and efficiently assess the legality of a given part or the whole of a ROBOT, an event volunteer role
JUDGE	JUDGES meet with teams to learn about and celebrate the unique journey and accomplishments of each team and evaluate these against award requirements. JUDGES interact with STUDENTS during the interview process, and in the pits. As a group, JUDGES determine the teams that receive awards at events
LAUNCH/LAUNCHING	shooting or throwing into the air
LAUNCH LINE	the white tape which bounds 2 triangular LAUNCH ZONES, as well as 2 segments of white tape located at the base of the GOAL
LAUNCH ZONE	infinitely tall triangular volumes bounded by LAUNCH LINES and the FIELD perimeter
LEAVE	a scoring accomplishment in which a ROBOT must move such that it is no longer over any LAUNCH LINE at the end of AUTO
LOADING ZONE	an approximately 23 in. (58.40 cm) wide by 23 in. (58.40 cm) deep infinitely tall volume bounded by white tape and the adjoining FIELD perimeters
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	a 30-second AUTO period, an 8-second transition period between AUTO and TELEOP, and a 2-minute TELEOP period in which the ROBOT plays the current season game
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 5 points towards the opponent's MATCH point total

Term	Definition
MOMENTARY	describes durations that are fewer than approximately 3 seconds
MOTIF	a series of ARTIFACT colors, comprised of 2 purple (P) and 1 green (G), in a unique order
OBELISK	OBELISK is an equilateral triangular prism located just outside of the FIELD perimeter
OPERATOR CONSOLE	the set of COMPONENTS and MECHANISMS used by the DRIVE TEAM to relay commands to the ROBOT
OVERFLOW	An ARTIFACT that passes through the SQUARE but does not meet CLASSIFIED criteria
PATTERN	A scoring achievement in which points are scored based on the color of the ARTIFACT on the RAMP matching the individual index color defined by the MOTIF
PIN/PINNING	<p>Preventing an opposing ALLIANCE ROBOT from moving, accessing, or exiting an AREA for an extended period by obstructing ALL paths of travel this includes the following conditions:</p> <ul style="list-style-type: none"> A. Limiting the movement of an opponent ROBOT to a small or confined area of the FIELD, approximately one foam TILE or less, without an avenue for escape. If a ROBOT is not attempting to escape, it's not considered a violation. B. Preventing the movement of an opponent ROBOT directly or transitively through contact with the FIELD perimeter, game structure, another ROBOT. C. Controlling an opponent's movements by raising or tilting the opponent's ROBOT off the TILES.
PORTFOLIO	A document used as part of the judging process with requirements outlined in A201
RAMP	A structure that can fit up to 9 CLASSIFIED ARTIFACTS
RANKING POINTS (RP)	credited to a team based on their ALLIANCE'S performance in Qualification MATCHES
RANKING SCORE (RS)	A team's RANKING SCORE (RS) is the average number of RANKING POINTS earned by a team throughout their Qualification MATCHES
RED CARD	a penalty 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 the current season's game, an event volunteer role
REPEATED	describes actions that happen more than once within a MATCH

Term	Definition
ROBOT	an electromechanical assembly built by a <i>FIRST</i> Tech Challenge 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, and movement about the FIELD
ROBOT CONTROLLER	Android device (smartphone or REV Control Hub) that runs the ROBOT CONTROLLER app to control the ROBOT as defined in R701
ROBOT SIGN	A ROBOT SIGN simultaneously identifies a ROBOT'S team number as well as its ALLIANCE affiliation for FIELD STAFF.
SCORING ELEMENT	There is 1 type of SCORING ELEMENT used in DECODE: the ARTIFACT.
SECRET TUNNEL ZONE	an approximately 46.5 in. (118.10 cm) long by approximately 6.125 in. (15.55 cm) wide infinitely tall volume bounded by ALLIANCE colored tape, the GOAL assembly, the LOADING ZONE, and the adjoining FIELD perimeter
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 REV Control and Expansion Hub sensor input/output signals (DIO, analog, I2C, encoder, 485)
SPIKE MARK	1 of 6 white tape marks 10 in. (25.40 cm) long used to identify the placement of 3 ARTIFACTS before the MATCH
SQUARE	a location at the top of the RAMP at which ARTIFACT scoring is assessed
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 in their home region as of September 1 st
SURROGATE	a team randomly assigned by event management software to play an extra Qualification MATCH
TELEOP	second period of each MATCH is 2 minutes (2:00) long and called the teleoperated period (TELEOP). During TELEOP, DRIVERS remotely operate ROBOTS
TILE	flooring surface of the FIELD is made of 36 interlocking soft foam TILES
VENDOR	a legitimate business source for COTS items that satisfies criteria defined in section 12 ROBOT Construction Rules (R)
VERBAL WARNING	a warning issued by event staff or the Head REFEREE
YELLOW CARD	a warning issued by the Head REFEREE for egregious ROBOT or team member behavior or rule violations
WTA	wireless technical advisor an event volunteer role