Team Update 02

General

WPILib 2026.2.1 Released

WPILib 2026.2.1 has been released. This optional update contains the game specific elements (field images and AprilTag maps) as well as fixes for a few minor bugs discovered since the Kickoff release. Downloads and a complete change log can be found on GitHub.

Awards

The FIRST Impact Award Definitions have been updated to remove confusion caused by the parentheticals. This change helps reflect the original intent to allow teams to use the definitions for all STEM activities.

The FIRST Impact Award Judging Guidelines has been updated to provide clarification to judges.

Game Manual

5.3   Areas, Zones, & Markings

− **ROBOT STARTING LINE:** an ALLIANCE colored line that spans the width of the FIELD at the edge of an ALLIANCE~~'S BASE~~ ZONE in front of two ~~BARRIERS~~ BUMPS and an ALLIANCE HUB.

6.5   Scoring

6.5.2   ROBOT Scoring Criteria

Additionally, a ROBOT must be contacting ~~the~~ at least one RUNG~~S~~ and/or at least one UPRIGHT~~S~~ and may additionally only contact the following elements:

A. the TOWER WALL,
B. support structure,
C. FUEL, and/or.
D. another ROBOT.

8.1   General ROBOT Design

R106   Horizontal extension – one direction at a time.
Term "FRAME PERIMETER" corrected to "ROBOT PERIMETER".

8.4   BUMPER Rules

R404   *BUMPERS must be soft.

Term "ROBOT FRAME PERIMETER" corrected to "ROBOT PERIMETER".

R409 ***BUMPERS should be passive**. BUMPERS must be fixed relative to the ROBOT PERIMETER. BUMPERS may not contain any ~~moving~~ elements <mark>which move during the MATCH</mark> ~~(beyond compression and flex of BUMPER materials)~~ or electrical elements.

> <mark>Compression and flex of BUMPER covers and/or padding materials, and incidental, inconsequential compression and flex in backing and/or fastening systems are not considered violations of this rule.</mark>

Team Update 01

General

KitBot Documentation Updates

AM14U6 printed instructions included with the KOP drive base have an error on page 8:

– Under the "Square" configuration compatible with the 2026 KitBot, the instructions state to cut 6 inches off each end of the side plates. The correct instructions is to cut 3 inches off the end of each side plate. The online instructions have been updated.

KitBot Build Instructions have been updated with corrected link to drawings.

Playing Field Resource Updates

The following Playing Field Resources have been updated:

– Coordinate for AprilTag ID9 has been corrected in the Field Dimension Drawings.
– Team Test Hub AprilTag positions have been corrected in CAD model and Build Instructions.

Game Manual

6.5.1 Scoring

6.5.2 ROBOT Scoring Criteria

– For LEVEL 1 – a ROBOT must no longer be touching the CARPET or the TOWER BASE, or

…

A ROBOT may only earn TOWER points for LEVEL 1 during AUTO. A ROBOT may only earn TOWER points for a single LEVEL during TELEOP. A ROBOT that earns TOWER points in AUTO is eligible to earn additional TOWER points during TELEOP.

6.5.3 Point Values

Table 6-4 REBUILT point values

	MATCH points	Ranking Points
*ENERGIZED RP – The amount of FUEL scored in ~~the~~ an active HUB is at or above threshold.		1
*SUPERCHARGED RP – The amount of FUEL scored in ~~the~~ an active HUB is at or above threshold.		1

6.8   Other Logistics

SCORING ELEMENTS that leave the FIELD (other than through the opening at the base of the OUTPOST) are placed back into the FIELD approximately at the point of exit by FIELD STAFF (REFEREES, FTAs, or other staff working around the FIELD) at the earliest safe opportunity.

7.4   In-MATCH

G405   *Keep SCORING ELEMENTS in bounds. A ROBOT may not intentionally eject SCORING ELEMENTS from the FIELD (either directly or by bouncing off a FIELD element or other ROBOT) with an exception of through the opening at the base of the OUTPOST.

Violation: MINOR FOUL. If REPEATED, MAJOR FOUL.

8.5   Motors & Actuators

R501   *Allowable motors.

Table 8-1 Motor allowances

Motor Name	Part Numbers Available	
REV Robotics NEO Brushless	REV-21-1650 (v1.0 or v1.1) REV-21-1653	am-4258

R502   *Only 4 propulsion motors. A ROBOT may not have more than 4 propulsion motors. A propulsion motor is a motor that enables the ROBOT to move around the FIELD surface (i.e., carpet). Motors that generate small amounts of thrust as a secondary or incidental feature are not considered propulsion motors.

> Examples that are not considered propulsion motors include:
> A. motors that primarily alter the alignment of a wheel in contact with the FIELD surface (such as a swerve steering motor),
> B. motors that run MECHANISM wheels (e.g. for SCORING ELEMENT manipulation) that occasionally happen to contact the carpet, but without enough force to generate significant thrust, ~~and~~
> C. motors that change the speed of the drive wheels using a shifting MECHANISM without significantly contributing to propulsion, and
> D. motors that enable the ROBOT to move via contact with non-carpeted surfaces of FIELD elements.

8.6   Power Distribution

R621   *Protect circuits with appropriate circuit breakers. Each branch circuit must be protected by 1 and only 1 circuit breaker or fuse on the PD per Table 8 3. No other electrical load can be connected to the breaker or fuse supplying this circuit with the exception of devices downstream of a permitted motor power adapter board placed between the PD and a motor controller (WCP-1380, WCP-1903, WCP-1904, RF-4003, RF-4004, RF-4005).

11.5 *FIRST* Championship Eligibility

Table 11-8 District FIRST Championship and awards allocations

District	Allocated *FIRST* Championship Slots	*FIRST* Impact Award Winners	Dean's List Award Finalists	Engineering Inspiration Award Winners	Rookie All-Star Award Winners	Woodie Flowers Award Finalists
FIRST Mid-Atlantic	23	2	4	2	1	~~1~~ 2

14.6 TEST AREAS and PRACTICE AREAS

FIRST Robotics Competition events have TEST AREAS. TEST AREAS are areas at events where teams can test their ROBOT with representative FIELD elements. ~~Teams may also be able to test their starting AUTO modes but they are not designed for multiple SCORING ELEMENT AUTO modes or full FIELD play.~~ Teams may also be able to test their starting AUTO modes but TEST AREAS are not designed for full FIELD play such as AUTO modes that traverse larger areas of the FIELD or interact with multiple FIELD elements. TEST AREAS are tether-only. FUEL is not provided and if a team wishes to practice with FUEL, they must bring their own.

Team Update 00

General

Team Update 00 is provided as a quick reference of evergreen rule changes. The approach taken in this Team Update is to describe changes to content only. Editorial changes to verbiage, rule and section references, game specific examples that relate to evergreen content, and formatting changes are not described.

As always, it's important to read the whole manual at least once and become an expert on sections of the manual that directly relate to your role and responsibilities on your team. Teams are welcome to ask (thoughtful, informed) questions through the official Q&A system, opening at noon (Eastern time) on January 14th, 2025.

Game Manual

General Updates

- All dimensioning in the manual has been updated to a new format using rounded decimal values for most dimensions as described in Section 1.6.
- New this season, Field Dimensional Drawings package has critical dimensions for each field element in addition to the Full Drawing Package.
- The term "Coach" has been updated to "Drive Coach" throughout the manual.
- Changes to evergreen content (i.e. rules with green headlines) are described below. Sections are presented according to the 2026 manual presentation, and rule references present the 2025 rule number first followed by the 2026 rule number as a reference.

Section 6 Game Details

- Section 6.7.1 has been updated to allow up to 2 members to talk with the Head REFEREE as noted in this blog.

Section 7 Game Rules

- **G101 → G101, Humans, remain outside the FIELD.**
  - Rule language has been updated to focus on prohibiting reaching into the FIELD.
- **G102 → G102, Never step over the guardrail.**
  - Rule language has been updated to include only entering the FIELD when lighting is green.
- **G208 → G208, Show up to your Qualification MATCHES.**
  - Rule language has been updated to specify this rule applies to Qualification MATCHES.
  - The violation text is updated from "~~DISQUALIFIED~~" to "<mark>DISQUALIFIED from the current MATCH</mark>".
- **G302 → G302, Limit what you use during a MATCH.**
  - Rule language has been changed to simplify intent of the rule and focus on which items can be used during a MATCH.
- **G414 → G410, Keep your BUMPERS low.**
  - Rule language has been updated to clarify intent of the rule.
- **G416 → G411, Don't Damage the FIELD.**
  G417 → G412, Watch your FIELD interaction.

- o Both rules have been made evergreen for this season.

Section 8 ROBOT Construction Rules

- **R203 → R203, General safety.**
  - o Blue box has been modified to increase clarity on permitted lasers, prohibit lead even if encapsulated, and prohibit bright flashing lights.
- **R205 → R205, Don't contaminate the FIELD.**
  - o Rule language adjusted to include additional contaminates.
- **R304 → N/A, During an event, only work during pit hours.**
  - o This rule has been removed. Work outside the event venue during an event is still restricted by E401.
- **R401 → R401, BUMPERS almost all around.**
  - o This rule has been adjusted to allow for a BUMPER gap for the REBUILT season.
- **R402 → R402, BUMPER Construction.**
  - o Hollow pool noodles no longer allowed, crosslinked polyethylene foam is explicitly allowed.
- **R406 → R406, Fill BUMPER corners.**
  - o This rule has been adjusted to allow for BUMPERS to be constructed with padding wrapped around a corner.
- **R409 → R409, BUMPERS should be passive.**
  - o This rule has been adjusted to clarify BUMPERS must be fixed relative to the ROBOT PERIMETER and not contain any moving elements.
- **R412 → R412, Team number on BUMPERS.**
  - o This rule has been adjusted to require BUMPER numbers on 3 locations.
- **R501 → R501, Allowable motors.**
  R504 → R504, Power (most) actuators off of approved devices.
  R505 → R505, Don't overload controllers
  - o These 3 rules have been adjusted to reflect added and removed devices.
  - o Removed:
    - Nidec Dynamo BLDC
    - DMC60 motor controllers
    - Jaguar motor controllers
    - SD540 motor controllers
    - Victor 884 and Victor 888 motor controllers
  - o Added:
    - The Thrifty Bot Pulsar 775
- **R601 → R601, Battery limit – everyone has the same power.**
  - o This rule has been updated to add that battery vents must not be obstructed.
- **R609 → R609, Connect main power safely.**
  - o Added AndyMark Power Distribution.
- **R615 → R615, Power roboRIO as specified.**
  R616 → R616, Power radio as specified – Part 1.
  R617 → R617, Power radio as specified – Part 2.

- o These 3 rules have been rewritten to accommodate a wider range of PD options.
- **R616 → R616, Power radio as specified – Part 1.**
  - o Updated to remove VRM and RPM as legal ways of powering the VH-109 radio.
- **R619 → R619 Only use specified circuit breakers in a PD.**
  - o Added CTR Electronics circuit breakers.
- **R701 → R701 Control the ROBOT with a roboRIO.**
  - o Updated to the 2026 RoboRIO image version, 2026_v1.2
- **R703 → R703 Use specific Ethernet port for roboRIO**.
  - o Updated for VH-109 v1.5 radio and removal of VRM and RPM as legal VH-109 power options.
- **R901 → R901, Use the specified Driver Station Software**
  - o Updated to the 2026 Driver Station version, 26.0
- **R904 → R904, OPERATOR CONSOLE physical requirements.**
  - o Part D was updated to allow teams to clamp to the DRIVER STATION shelf (as long as shelf is not damaged).

Section 9 Inspection & Eligibility

- The introduction text in this section has been updated to require all teams to be re-weighed prior to Playoff MATCHES to help identify any modifications that should be re-inspected per I104.

Section 10 Tournaments

- **Section 10.2** Added "Once a MATCH replay is granted, a team may not withdraw the request for the replay."

Section 12 Regional Tournaments

- This section has been updated to reflect the 2026 process for teams qualifying for *FIRST* Championship.

Section 14 Events

- **E117** is a new rule to clarify that nobody should record interactions with others without their permission while at *FIRST* events.
- **Section 14.4 Load In** – Section updated to help clarify which rules apply to Districts & Regionals.
- **E401 → E401, Load in during Load-In**
  - o 3D printed parts was added as an exception.
- **E402 → E402, Load-In person limit is 6.**
  - o Rule updated to increase limit from 5 to 6.
- **E510** is a new rule to clarify that running any automated tools overnight is not allowed in the pits.
- **E511** is a new rule to remind teams that pit power is often shared between multiple teams, and that teams who are causing breakers to trip may be asked to reduce the amount of power being used.
- **Section 14.6** has been updated to change wording from Practice Fields to TEST AREAS and PRACTICE AREAS throughout.