

INFINITE RECHARGESM





Auburn Mountinview Site Specific
Information
February 19, 2020



2020 DISTRICT SCHEDULE
PACIFIC NORTHWEST DISTRICT
AUBURN MOUNTAINVIEW EVENT

Competition Schedule

Friday, March 6, 2020	
5:00PM-9:00PM	Pits Open
Saturday, March 7, 2020	
8:00AM-10:30AM	Pits Open, Practice Matches, Inspections
10:30AM-11:00AM	Opening Ceremonies
11:00AM-1:00PM	Qualification Matches
1:00PM-2:00PM	Lunch
2:00PM-7:30PM	Qualification Matches
8:00PM*	Pits Close
Sunday, March 8, 2020	
8:00AM	Pits Open
9:00AM-9:30AM	Opening Ceremonies
9:30AM-11:30AM	Qualification Matches
11:30AM-12:00PM	Alliance Selections
12:00PM-1:00PM	Lunch
1:00PM-4:00PM	Playoff Matches
4:00PM-4:45PM	Awards/Closing Ceremony
5:15PM*	Pits Close

**Schedule subject to change. All times are estimated based on flow of rounds.
See Pit Administration table for updated times.*

Auburn Mountainview

Is a Friday, Saturday, Sunday event

- Day 1 is Friday
- Day 2 is Saturday
- Day 3 is Sunday

To lessen confusion, the rest of this PowerPoint will talk about Day 1, Day 2 and Day 3

Overview of Presentation

- Event Specific Information
 - General Logistics: Parking/Busses/Food
 - Load in / Load Out
- Walk through of the event
 - Tour of the areas
 - Day 1: Inspection Day
 - Day 2: Qualifications
 - Day 3: Eliminations

Before you arrive!

We need your main contact while onsite to visit <http://firstwa.org/FRCRSVP> and register

- By default you will not receive a pit table from us. If you need us to provide you a table, you need to request one when you register on firstwa.org
- Acknowledge you have 3" wheels
- Student/Mentor count
- Your mobile phone number - **This is extremely important in case we need to contact you at the event.**
- Please do this by **Monday, 2-24-20** (if you complete this form after 2-24-20 you may not receive a table)

New this season! – we need a bit of help.

Last year we found we were really struggling with tear down help. I know teams are ready to pack up and leave but many of our volunteers not only work full time and mentor teams; they come to additional trainings and are first in - last out at our events.

We would love to have some extra support from teams to get everything packed up and loaded into our trucks after the event ends.

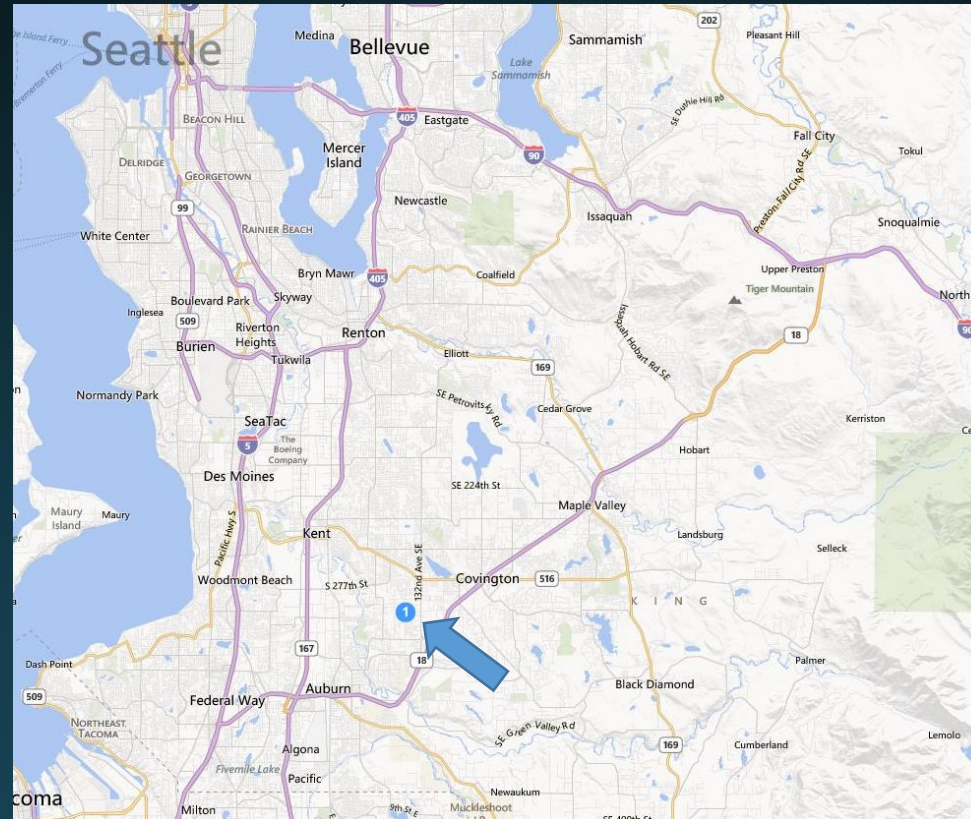
Because we understand that most teams need to make transportation arrangements in advance, we are hoping that by notifying you of our need early, it will make it easier for teams to offer additional support. Many hands make light work and hopefully we will be able to get everyone home quickly with lots of help!

Could you please fill this form out if you are able to help tear down any of our events:

<https://app.smartsheet.com/b/form/b51e13b5b36f4a1994a783ab7fbc8127>

Auburn Mountainview High School

28900 124th Ave Se, Auburn, WA

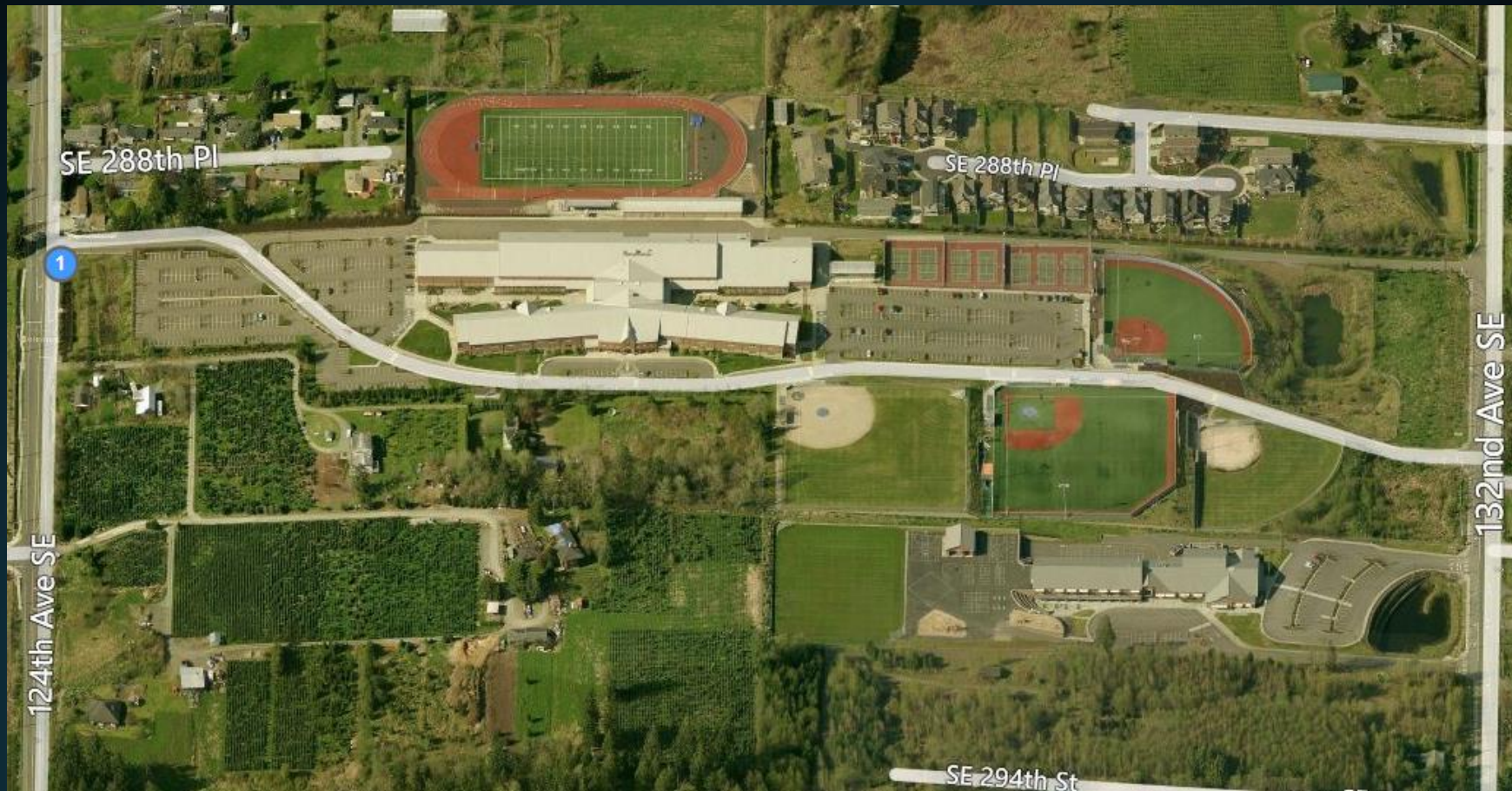


Day 1 Arrival

- Please don't enter the building before 5:00 pm
- You will not be allowed in the building before 5:00 pm!
- Please do not come in early!
 - We will be setting up prior to 5:00 pm and won't be ready

Logistics: Arriving at AMHS

28900 124th Ave Se, Auburn, WA



Directions for loading in & parking Day 1

- You may start lining up to drop you stuff off at 4:15 Day 1 ****please don't arrive early**
- Pits won't open until 5pm
 - We are setting up the room from 3pm to 5pm
- Available parking for **Day 1** shown below



Logistics: Parking

- Friday after 4pm parking is available.
- Saturday & Sunday: You may park onsite



Day 2 & 3 Arrival

- Day 1 doors will open at **5:00 pm**
 - Please don't arrive early, you will create a traffic problem for the school if you arrive early
 - If you do arrive early, feel free to visit a coffee shop on your way to the venue!
- Day 2 & 3 doors will open at 8:00 am
- If you arrive early, please be prepared to wait outside

Trailer Parking

- Friday: After unloading you may park in the E. Campus parking by the tennis courts
- Contact Pit Admin if you need to leave your trailer onsite for the weekend
- Sunday: you may park trailers in the bus lanes.

Logistics: Bus Transportation

- Day 2 & 3 after 8 am, **busses** and large vans can drop students behind the pits using the schools bus lane.
- THIS IS NOT BUS PARKING!
- We recommend the Safeway parking lot north on 132nd

Logistics: Food

- Concessions will be open Day 1 (with limited options) Day 2 & 3
- Bringing Food – The commons will be available to set up for lunches
 - You will not be allowed to plug in crock pots to keep food warm.
- Pre-order Pizza's will be available for teams.
 - Order before pits close the day before
 - Turn in orders at the concession stand
- **Note: please do not plan to use power onsite to heat food or keep it hot. We are using all of the power in the building and your crock pots etc will get unplugged.**
- Clean up after yourself

About the pit Power

- Pit power is limited. We are putting up to 8 teams on a single 20 amp circuit
 - Power generator is shut down overnight
 - Consider charging your batteries overnight at home / hotel
 - (Remember: 12 rounds may require several batteries)
 - No compressors or other large motors
 - Limit 400 watts per team, 2400 watts per 6 team Power Alliance
 - Lighting should go with low wattage
- High school gyms have very little power
 - You may NOT use any outlets in or around the gym
 - The game equipment uses all available power
 - We will remove and confiscate any equipment from gym outlets until after awards ceremony on Saturday. **You have been warned!**

Safety Glasses

- Teams are expected to provide safety glasses for their team members and spectators to use in the pits
- The safety glasses FIRST Washington brings are for the public, not for teams or spectators affiliated with teams
- No safety glasses will be given out Day 1. **Have them with you and accessible when you load in, you will not be allowed in the pits without them.**
- We will not hand out safety glasses to anyone wearing a team shirt
- We will be very diligent about collecting the safety glasses when spectators leave the pits

Schedule Overview: Whole Event

- Day 1: Team Arrival and Inspections
 - Driver & Coaches Meeting will be at 7:30 pm **Day 1**
- Day 2: Qualification Matches
- Day 3 AM: Qualification Matches
- Day 3 PM: Final Rounds / Team Departures



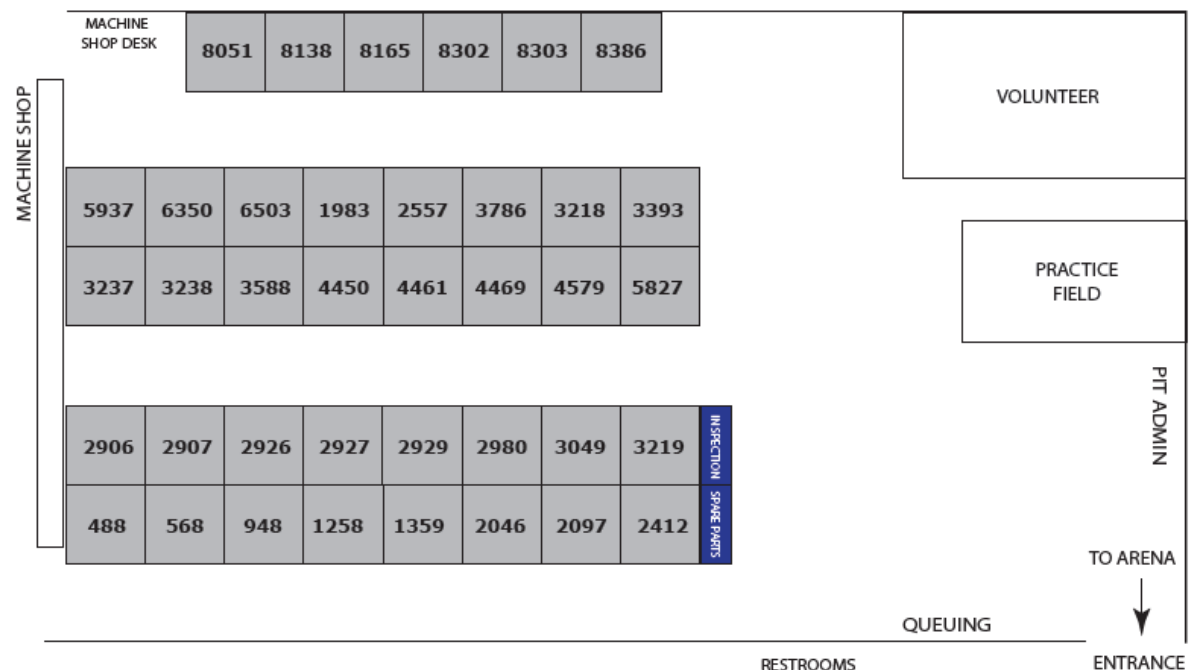
Load-In and Inspection

Day 1: 5pm – 9:00pm

- Safety glasses are mandatory. You will not be allowed into the area without them.
- Follow instructions from onsite staff.
- You may NOT park in the loading area. The driver MUST stay with the vehicle. Drop it and park in designated area. Staff your unload team appropriately to make this happen.
- Bring a cart! You will need a cart with at least 3" diameter wheels. Our cable protection bumps are 2" in height. We recommend 4" or larger wheels.
- Your FIRST and Only goal on Day 1 is passing inspection!



2020 PNW FIRST ROBOTICS AUBURN MOUNTAINVIEW DISTRICT EVENT



Team #	Team Name	Team City	Team State
488	Team XBot	Seattle	WA
568	Nerds of the North	Anchorage	AK
948	NRG	Bellevue	WA
1258	SeaBot	Seattle	WA
1359	Scalawags	Lebanon	OR
1983	Skunk Works	Seattle	WA
2046	Bear Metal	Maple Valley	WA
2097	Phoenix Force	Tukwila	WA
2412	Robototes	Bellevue	WA
2557	SOTAbots	Tacoma	WA
2906	Sentinel Prime	Spanaway	WA
2907	Lion Robotics	Auburn	WA
2926	Robo Sparks	Wapato	WA

2927	Pi Rho Techs	Graham	WA
2929	JAGBOTS	Puyallup	WA
2980	Whidbey Wildcats	Oak Harbor	WA
3049	BremerTron	Bremerton	WA
3218	Panther Robotics	Bonney Lake	WA
3219	TREAD	Auburn	WA
3237	Event Horizon	Spanaway	WA
3238	Cyborg Ferrets	Anacortes	WA
3393	Horns of Havoc	Puyallup	WA
3588	The Talon	Renton	WA
3786	Chargers	Kent	WA
4450	Olympia Fed	Olympia	WA
4461	Ramen	Seattle	WA

4469	R.A.I.D	Federal Way	WA
4579	RoboEagles	Federal Way	WA
5827	Code Purple	Kirkland	WA
5937	MI-Robotics	Mercer Island	WA
6350	Clawbots	Enumclaw	WA
6503	Iron Dragon	Seattle	WA
8051	TinkRex	Tukwila	WA
8138	SpicyBots	Tacoma	WA
8165	Bahlam Bots	Seattle	WA
8302	Beamer Team	Federal Way	WA
8303	GOLDEN_GATORS	Federal Way	WA
8386	Th3_IRON_G0@t5	Puyallup	WA

Map reference only, not drawn to scale



Wheel requirements for carts, boxes, and anything rolling

- Our venues will have power cord covers (aka Yellow Jackets)
 - Our yellow jackets are 2" tall
- Your FRC robot cart **MUST** have > 3" diameter wheels
 - Wheels must be in good working order. No damaged or stuck wheels. Soft rubber. No hard plastic or steel tread wheels.
 - Maximum weight for your carts, tool boxes, etc will be 50 lbs per inch of wheel size (1 cart, 4 x 3" wheels, 600lbs max)
- Under no circumstances will we allow wheels less than 3" in diameter on ANY equipment / boxes / carts
 - Very high likelihood of damage to floors
 - You won't clear our cable management equipment
- All wheels must be non marking rubber or synthetic wheels
 - No steel wheels. No sharp wheels.

Day 1 is Inspection Day

- Your primary goal for Day 1 is to get your robot to pass inspection.
- This is a short and intense activity. Preparation is the key to making it a good day.
- Asking for help is a good thing. Providing another team help is the highest honor in **FIRST**. Don't be bashful.
- Teams with lower numbers have experience.

Load-in & Inspection Callouts

- **No Bag & Tag – but watch out for [R16]**
- **During Load-in, take everything to your pit!**
- **Other important Inspection changes this year:**
 - [I1] It's your team's robot – New rules around who can build MAJOR MECHANISMS
 - [I3] Multiple configurations can only weigh up to 150lbs – Any given configuration still must be ≤ 125 lbs
- **Be careful with:**
 - [R9] Specifically around light sources. Not required but highly suggested that any bright light source be:
 - Shrouded
 - Directed only at the target
 - Able to be turned off when not in use

Day 1 Pits Open: 5pm

- At exactly 5 PM we intend to open the pit area for everyone.
- You must wait for clearance to enter the building.
- You MUST have safety glasses on your face!
- We can not provide safety glasses for team members. You MUST bring your own.

Do less better

- These are smaller events.
- You are onsite for less time.
- Consider travelling light!
 - Less setup time
 - More room in your pits
 - Save the big pit displays for District Championship!

Day 1 Team Registration: 5PM

- Your lead mentor must visit the pit admin desk starting at 5PM.
- Bring required forms
 - Team Roster printed from TIMS with hand written additions if needed.
 - Consent forms for all team members (students and adults) who aren't in TIMS/STIMS **The expectation is that all of your students and mentors have registered and are on the printed roster. You should have very few printed consent forms.**

Once your roster and consent forms are received, we will give you your driver buttons and RFID tags for the Dart system.

Please remember to return these tags once you are done competing...don't be that team...

Who to bring Day 1

- You really want your drivers and core robot builders and mentors Day 1.
- Depending on your teams logistics, you might consider having a partial team Day 1 and the whole team Day's 2 & 3.
- Day 1 is NOT a good spectator day
 - It is ALL in the pits Day 1.

Veteran Teams

- Bring Spare Parts
- Please consider bringing unused sensors, motors, control units, and hardware for loan to other teams.

Day 1

Inspection Process: 5PM

- Inspection involves 4 steps
 - Size and weigh-in at the inspection station
 - Control system inspection at the CSA station
 - Physical robot inspection at your pit starting 5PM
 - Connection to the field controller at least once Friday morning
- Inspectors are your friend! Inspectors are here to help get you on the field safely and fairly. They will help you pass inspection.

Starting the inspection process

- You may enter the weight / size line at any time after 5PM.
- After weight and size, stop at the CSA desk for the control software check.
- You may sign up at the Inspection desk for an in-pit inspection appointment starting at 5 PM. We invite you to sign up early.

Inspection Tips

- It is rare for a robot to pass inspection on the first attempt. It is an iterative process.
- PLEASE: Get inspected early, even if you are not ready. You might have an issue that takes time to fix.
- All teams must connect to field as part of inspection.
- You MUST pass inspection to earn qualifying points.

WPA Key Assignment

- Your robot radio (WPA Key) must be reprogrammed at each event you attend.
- This is required to connect & compete at the field.
- A kiosk (with instructions) is provided for you to program your radio.
 - The kiosk will be located at inspection or pit admin

Word to the Wise

- Day 1 is no longer the final build day. It is now pass inspection day!
- Do not be bashful about asking for help. We have all been there before.

End of Day 1

- The pits close at 9:00PM on Day 1.
- You **MUST BE OUT OF THE BUILDING** before 9:00PM. The building closes at 9:00PM.
- We dislike doing it, but we will come lead you out of the building starting at 8:55PM. No exceptions.

Practice Rounds: Day 2 8:30 AM

- Practice matches are scheduled, and will run from 8:30 AM to 10:00 AM
- You have to pass inspection to run a practice match.
- It is very common for teams not to be ready for their scheduled match in the mornings. We will accept teams on a first come/first served basis who wish to take an unscheduled practice round. Check in with the lead Queue Manager to get on the list.
- Priority will always be given to teams scheduled and/or teams who have not been on the field at least once. Be gracious and professional if you get bumped for a higher priority team.

Connecting to the field: The Final Step

- If you run a practice match during Day 2 morning, the field computer will remember that as your last step of the inspection process.
- If you are unable to make a practice match, we are going to ask you to take your robot and control system out to the field for a quick 5 minute test to insure your system can connect to the field. Your robot will not be on the field, we will simply connect it to the field while sitting on your cart.
- THIS IS A MANDATORY STEP!
- Many simple issues are solved by doing this on Day 1 that would otherwise cause you problems when it really counts!
- Our goal is for you to connect to the field by 10:30 AM Day 2

Machine Shop Open: Day 2

- We have a volunteer machine shop onsite to help you fabricate replacement parts.
- The shop has small mills, lathes, and various other tools.
- **ONLY AUTHORIZED MACHINE SHOP VOLUNTEERS MAY USE THESE TOOLS!**
- We have excellent volunteer machinists. However, there are limits to what they can do for your team.
- We have a TIG welder.
- The machine shop has request forms for your team. It will be located near the loading ramp on the arena floor.
- In general, the machine shop will NOT loan you tools.

Day 3: Load Out

- No parking in load out area.
- Load out during elimination rounds on Day 3 is fine

Workshops and Quiet room

We don't currently have a host team for a quiet room at this event. If your team is willing to host the quiet room, please see pit admin Day 1 for instructions.

Workshops being held at this event: All workshops will be Day 2 in the same room

- 2930 will be hosting a safety roundtable from 9:15 am – 10:15 am
- 5937 will be hosting a Marginalized Gender Meeting from 11:00 am – 12:00 pm
- 3786 will be hosting a Getting Started with Outreach workshop from 2:30 pm – 3:30 pm
- 2980 would like to host a Creating a better world through FIRST from 4:00 pm – 5:00 pm

Exciting new technology during
match play this year!

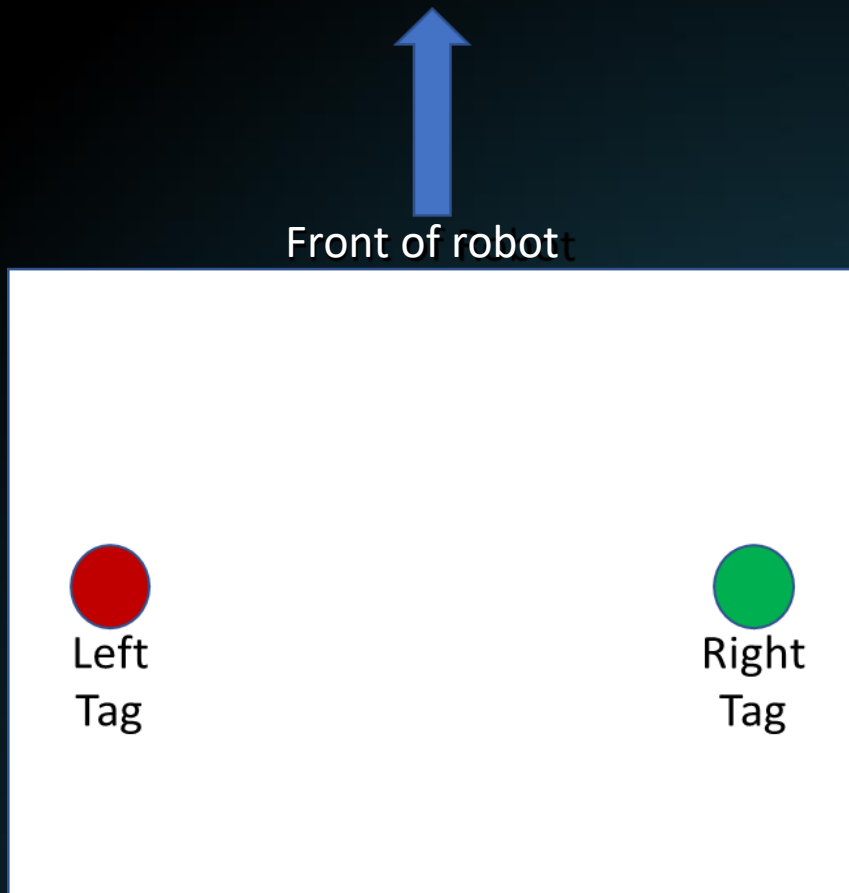
Zebra Technologies
&
FIRSTWA

General Information

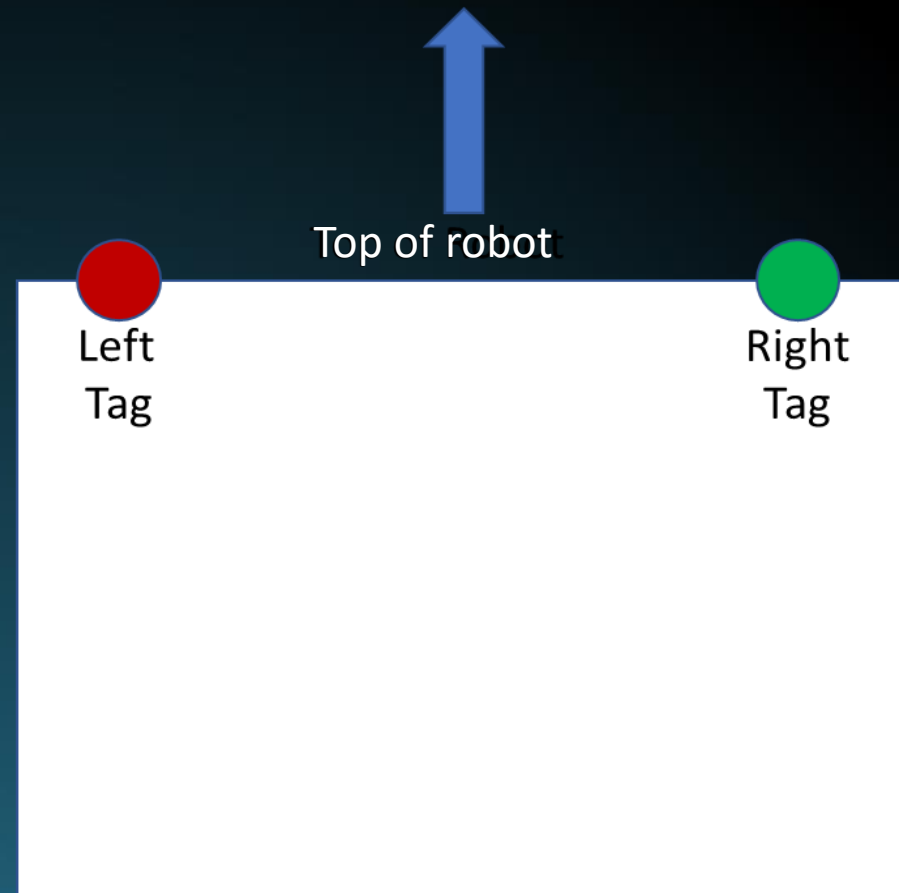
- Data collected 12 times per second
- Data collected for all robots every match of every event
- We can determine robot velocity, heading, acceleration, kinetic energy, and much more
- Trending of robots through the season

Attaching Tags

- Installed via double-sided tape and cable ties (provided by FIRSTWA)
- Tags must be placed high on the robot and not surrounded by any metal.
 - Think about where you need to install your radio, then look for that type of spot for these tags.
- Keep the tags lined up from left to right; draw an imaginary line connecting your two tags, and that line should be perpendicular to the direction of your robot's forward motion.



Top View



Back View

Questions

- FIRSTWA Discord

<https://discord.gg/7RJ5Vha>

- Chief Delphi

**Zebra MotionWorks™ for FRC 2020 Location
Announcement**

Curriculum used to enhance *FIRST* in schools

Coaches! Please share with *FIRST* Washington what curriculum (if any) you utilize to enhance *FIRST* in your school. Common ones include: Project Lead the Way (PTLW) Core Plus and Skills USA.

Many corporate partners and the State of Washington wants to know so please let us know. Oregon and Alaska teams...please share too!

This information will help us continue to build the case for additional resources for you all (space, funding, equipment, etc.)

Take a minute to fill out this form and tell us

<https://app.smartsheet.com/b/form/6970441f3f0648aca5a40c859e603520>

Thanks for attending

- You can contact arime@firstwa.org with additional questions
- These slides will be posted on: <http://firstwa.org/Team-Resources/FIRST-Robotics-Competition-Team-Resources>