

# 2024 Peachtree District Qualifier

## Carrollton

*PRESENTS*

# CRESCENDO<sup>SM</sup>

PRESENTED BY   
Gene Haas Foundation

March 21<sup>st</sup> – 23<sup>rd</sup>, 2024  
University of West Georgia, Coliseum  
325 W. Georgia Drive  
Carrollton, GA 30117



Georgia**FIRST** Robotics

[www.gafirst.org](http://www.gafirst.org)

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Welcome to the Peachtree District Carrollton event!

Greetings to our teams! We look forward to seeing how you solved this year's *FIRST* Robotics Competition (FRC) challenge, Crescendo! This event marks the culmination of months of hard work, creative problem solving and incredible teamwork. Here, on the arena floor, you will test your design, strategy and fabrication skills. You have learned what it means to be part of a team and you have contributed to its success. In the spirit of Gracious Professionalism®, your opponents will become your friends and colleagues – for years to come.

To all of our volunteers, mentors, teachers, and parents: thank you for your year-round support to create this outstanding opportunity for our students. Your investment of time and energy has been significant and you have served as terrific role models. You have positively impacted this next generation of innovators, educators, engineers and leaders and you should be proud of your accomplishments!

To all our sponsors and partners: you play a critical role through your commitment of funding, volunteers, internships, and leadership. You know the importance of a workforce that is technically astute, innovative, and energized and recognize that *FIRST* participants are the future workforce that keeps our country competitive in the global economy. The Peachtree District Carrollton Qualifier Event and all *FIRST* year-round STEM related activities have been made possible thanks to your support!

We invite everyone to join us in cheering for these students as they exhibit lessons and skills learned over the past several months. Watch them compete on the arena floor and visit them in the pits. Talk to them and congratulate them! They are all winners! They are our future!

On behalf of the leadership of Georgia*FIRST* Robotics, we wish all participating team members great success, volunteers amazing fun and spectators super charged excitement! Best of luck to everyone!

Good luck teams!

Brian Cooksey  
President, Georgia*FIRST* Board of Directors  
Shaw Industries

Connie Haynes  
CEO  
Georgia*FIRST* Robotics

Jan Spurlin  
Chair, Georgia*FIRST* Leadership Committee  
Service Now

Chris Cortez  
FRC Program Delivery Partner  
*FIRST* South Carolina



PRESENTED BY **HAA5**  
Gene Haas Foundation

## Carrollton District Event Schedule\*

### (Day 0) 3-21-24

5:00pm - 10:00pm  
7:00pm – 7:30pm  
7:30pm – 9:00pm  
9:00pm – 9:30pm  
9:45pm  
10:00pm

### (Day 1) 3-22-24

8:00am - 10:15am  
8:00am - 9:00am  
8:30am – 9:00am  
9:00am – 9:30am  
9:30am – 10:00am  
10:30am - 11:00am  
11:00am - 1:00pm  
1:00pm - 2:00pm  
2:00pm - 7:00pm\*  
8:00pm\*

### (Day 2) 3-9-24

8:00am  
9:00am - 9:30am  
9:30am - 12:30pm  
12:30pm - 1:00pm  
1:00pm - 2:00pm  
1:30pm  
2:00pm - 5:00pm  
2:30pm\*  
5:30pm\*

### Thursday

Teams Load In, Pits Open, Inspection  
Calibration & Measurements on Field  
Test Matches for Day 0 Load In Teams  
Calibration & Measurements on Field  
Load-In Closes  
Pits & Venue Close

### Friday

Pits Open, Inspections  
Load-In  
Calibration & Measurements on Field  
Drive Team Meeting (on-field) & Safety Meeting (TBD)  
Test Matches for Day 1 Load In Teams  
Opening Ceremonies  
Qualification Matches  
Lunch  
Qualification Matches  
Pits Close

### Saturday

Pits Open  
Opening Ceremonies  
Qualification Matches  
Alliance Selections  
Lunch  
Load Out Begins  
Playoff Matches & Awards Ceremony  
Practice Field Closes  
Pits Close

\*Scheduled times are subject to change based upon run schedule, field issues, or other factors.

# Registered Teams

832	OSCAR	Roswell, Georgia
1002	Circuit Runners Robotics	Marietta, Georgia
1414	IHOT	Atlanta, Georgia
1648	G3 Robotics	Atlanta, Georgia
1795	Team Clutch	Atlanta, Georgia
2974	Walton Robotics	Marietta, Georgia
3091	100 Scholars	Atlanta, Georgia
3635	Flying Legion	Warner Robins, Georgia
3815	NF Raiders	Cumming, Georgia
4026	Decatur Robotics	Decatur, Georgia
4188	Columbus Space Program	Columbus, Georgia
4189	Chargers	Jefferson, Georgia
4451	ROBOTZ Garage	Laurens, South Carolina
4459	Leo Techs	Lithia Springs, Georgia
4516	Hyperion	Roswell, Georgia
5109	Gladiator Robotics	Johns Creek, Georgia
5293	Metal Crusaders	Duluth, Georgia
5651	Maynard Jackson RoboJags	Atlanta, Georgia
5848	ROBO C3	Arlington, Georgia
5900	The Fighting Mongooses	Dalton, Georgia
6340	Marist Manatees	Atlanta, Georgia
6705	WildCat 5e	Dunwoody, Georgia
6712	Mountaineers	Chatsworth, Georgia
6887	Dalton Catabots	Dalton, Georgia
6944	Wolverines	Cumming, Georgia
7451	Avenger Robotics	Cumming, Georgia
8080	Sequoyah Robotics	Woodstock, Georgia
8100	Grayson Robotics	Grayson, Georgia
8577	GCA Champions	Atlanta, Georgia
8761	AHS Tigers	Adairsville, Georgia
8865	Dacula Droids	Dacula, Georgia
8866	Innovation Robotics	Alpharetta, Georgia
9057	G.I.R.L.	Atlanta, Georgia
9260	Built4Bibb Robotics	Macon, Georgia
9500	G28 Robotics	Roswell, Georgia
9522	Archimedes	Flowery Branch, Georgia
9582	HHS NASA Snagbotics	Conyers, Georgia
9770	Robo Knights	Atlanta, Georgia

# EVENT SPONSORS



COMCAST



***THANK YOU FOR MAKING THIS EVENT POSSIBLE!***

# Georgia**FIRST**Robotics

## 2024 Sponsors

Aflac	Atlanta Gas Light
Automation Direct	Bishop Clean Care
Carrier	City of Albany
Cobb County School System	Coca-Cola Corporation
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Dalton Convention & Visitors Bureau	Dalton State College
Georgia Assoc. of Manufacturers	Georgia Department of Education
Georgia Northwestern Tech College	Georgia Power
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PPG Foundation	Procter and Gamble
Shaw Industries	Southwire
UPS	Verizon
4C Academy, Albany	

***THANK YOU FOR YOUR SUPPORT OF  
GEORGIAFIRST AND THE PEACHTREE DISTRICT!***

# Event Judges

Will Dahlin, Event Lead Judge, Printpack

Bryan Haynes, State Lead Judge, Kimberly Clark

Tom Cleveland, Inspire Brands

Patrick Conn, Printpack

Doug Huggins, MindStar Magic & Mentalism

Karen Judd, Novelis

Gordon McClennen, Comcast

Sue Miller, BlueLinx Corporation

Michael Racel, DLL

Kasie Scott

Erin Shay, CSL

Alicen Van Klompenburg, Tellybox Consulting

Lornetta Weeks



**GeorgiaFIRST relies on dedicated volunteers and appreciates the contribution of time from everyone who participates. From the expertise of veterans who return year after year, to the enthusiasm of rookies, volunteers are the critical component that makes our events successful.**

**YOU inspire. YOU motivate. YOU influence. YOU transform lives.  
For this we say THANK YOU!**





# 2024 Game Description

In CRESCENDO presented by Haas, two competing alliances are invited to score notes (game pieces), amplify their speaker, harmonize onstage, and take the spotlight before time runs out. Alliances bring additional rewards for meeting specific scoring thresholds and for cooperating with their opponents.

## SCORING PERIODS

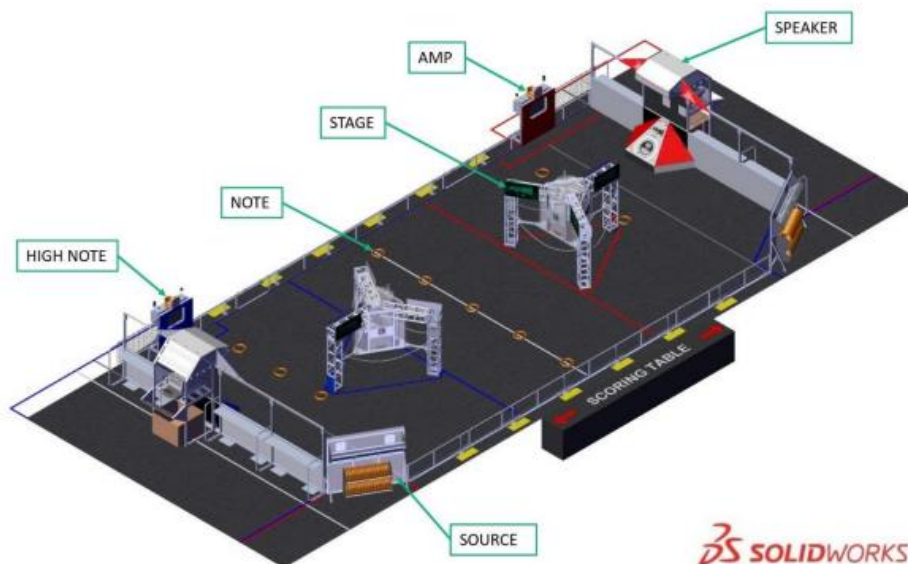
:15 Autonomous Period: Robots follow pre-programmed instructions and run autonomously (without guidance from their human drivers). During Autonomous, Alliances score points by:

- Leaving their starting zone,
- Retrieving and scoring notes (game pieces) in their speaker or amp,

2:15 Driver-Controlled Period: Drivers take control of the robots and Alliances score points by:

- Collect notes (game pieces) from human players at their source and score them in their amp or speaker,
- Each time an Alliance gets 2 notes in their amp, the human player can amplify their speaker for 10 seconds which increases the point value for any notes scored during the 10 second period.
- Coopertition Period – Human players may choose to repurpose a note scored in their amp in cooperation with their opponent. If each Alliance repurposes a note by hitting their Coopertition button in the first 45 seconds of this period, all teams in the match receive a Coopertition point.
- As time runs out, robots race to get onstage and deliver notes to their traps. Chains exist on the stage that robots try to hang on (robots must be off the floor). A human player can also toss a note onto the pipe (microphone) sticking above the stage for additional points.

The alliance with the highest score at the end of the match wins!



## District Ranking Explanation

In the District Model of competition, teams are ranked throughout the season based on the points they earn at their first 2 home District events they attend, as well as at their District Championship. Below is a breakdown of how points are awarded to teams from the *FIRST* Robotics Competition (FRC) Administrative Manual.

Point Category	Points
<b>Qualifying Rounds</b>	
Qualification Round Performance	$\text{QualificationPoints}(R, N, \alpha) = \left[ \text{InvERF} \left( \frac{N - 2R + 2}{\alpha N} \right) \left( \frac{10}{\text{InvERF} \left( \frac{1}{\alpha} \right)} \right) + 12 \right]$ <p>(For typically-sized district events, this will result in a minimum of 4 points being awarded for qualification round performance. For events of all sizes, a maximum of 22 points will be awarded)</p>
<b>Alliance Selection Results After Alliance Selection is Complete</b>	
Alliance Captains	Equal to 17 minus the Alliance Captain Number [e.g. 14 points for Alliance #3 Captain]
Draft Order Acceptance	Equal to 17 minus the Draft Order Acceptance Number [e.g. 12 points for the Team that is 5th to accept an offer of Alliance]
<b>Playoff Advancement</b>	
Teams on Alliances Advancing	Points awarded based on team participation in individual playoff rounds, and whether or not the alliance advances.
<b>Awards</b>	
Judged Team Awards	10 Points for Impact Award 8 Points each for Engineering Inspiration and Rookie All Star Awards 5 Points each for all other judged Team awards
<b>Team Age</b>	
Team Age	10 Points for Rookie Teams 5 Points for second-year Teams

Points earned at District Championships are multiplied by 3 and then added to points earned at District events, to determine the final season point total for the team. If there is a tie in the season point total between teams, a tie-breaker criteria is applied.

# Event Awards

At each district event, volunteers serve as Judges. Judges interview and observe teams in action and determine awards that are distributed during the closing ceremonies of each competition. The following is a list of FIRST® Robotics Competition awards. Every award may not be presented at every FIRST® Robotics Competition event.

**Autonomous Award** -- Celebrates the team that has demonstrated consistent, reliable, high-performance robot operation during autonomously managed actions.

**Creativity Award sponsored by Rockwell Automation** -- Celebrates creativity in design, use of component, or strategy of play.

**Engineering Inspiration Award** -- Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school and community.

**Excellence in Engineering Award** -- Celebrates an elegant and advantageous machine feature.

**Finalist** -- Celebrates the Alliance that makes it to the final match of the competition.

**FIRST Dean's List Award** -- Celebrates outstanding student leaders whose passion for and effectiveness at attaining FIRST ideals is exemplary.

**FIRST Impact Award** -- The most prestigious award at FIRST, it honors the team that best represents a model for other teams to emulate and best embodies the mission of FIRST

**Gracious Professionalism® Award** -- Celebrates outstanding demonstration of FIRST Core Values such as continuous Gracious Professionalism® working together both on and off the playing field.

**Imagery Award in honor of Jack Kamen** -- This award celebrates attractiveness in engineering and outstanding visual aesthetic integration of machine and team appearance.

**Industrial Design Award sponsored by General Motors** -- Celebrates form and function in an efficiently designed machine that effectively addresses the game challenge.

**Innovation in Control Award** -- Celebrates an innovative control system or application of control components – electrical, mechanical, or software – to provide unique machine functions.

**Judges' Award** -- During the course of the competition, the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition.

**Quality Award** -- Celebrates machine robustness in concept and fabrication.

**Rookie All-Star Award** -- Celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of FIRST to inspire students to learn more about science and technology. NOTE: This award may not be earned at each qualifier event.

**Rookie Inspiration Award** -- Celebrates a rookie team's outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as in their community.

**Safety Animation Award sponsored by UL Solutions** – Challenges teams to encourage safe practices by tapping into their creativity and influencing emotions and actions.

**Team Spirit Award** -- Celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork furthering the objectives of FIRST.

**Team Sustainability Award sponsored by Dow** -- Celebrates and recognizes a team which has developed a sustainable program in order to define, manage, and achieve the team's ongoing objectives.

**Winner** -- Celebrates the Alliance that wins the competition.

**Woodie Flowers Award** -- Recognizes an individual mentor who has done an outstanding job of motivation through communication while also challenging the students to be clear and succinct in their communications. Students on each team decide whom to nominate.



# Georgia**FIRST**Robotics

Thank you to all our generous sponsors, our faithful and energetic volunteers and the dedicated mentors who give countless hours to make *FIRST* possible for their students. Each FRC event relies on 100+ volunteers to plan and execute. As an all-volunteer organization, we pride ourselves on quality, safety and an overall experience of fun. Thank you to all those who work tirelessly behind the scenes to make *FIRST* happen.

The best of luck to all FRC teams this season from your  
Georgia**FIRST** Leadership Council!

Parker Bass  
Beth Culp  
Charles D'Englere  
Bryan Haynes  
Kellen Hill  
Scott Lee  
Roy McConnell  
Jeff Rees  
Jan Spurlin  
Greg Welsch

Adam Churney  
Tiffany Dean  
Lisa Hatch  
Connie Haynes  
Jackie Holland  
Ross Lindsay  
Monish Patil  
Flint Shephard  
Ray Spurlin  
Kathy Wood



# Georgia**FIRST**Robotics

Family and friends can watch the event live here: [www.gafirst.org](http://www.gafirst.org)

## How can you support Georgia**FIRST**?

### ***Form a Team***

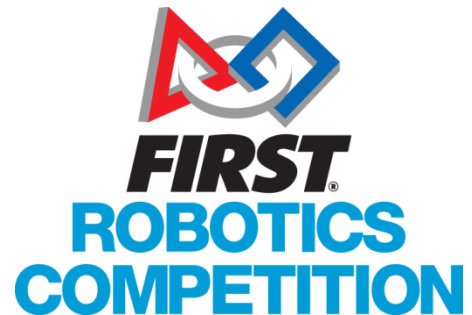
- Learn from engineering pros.
- Apply math and science concepts to design and build robots.
- Gain hands-on experience solving real-world problems.
- Learn about exciting science and technology careers.
- Make new friends.

Contact: Lisa Hatch     [lhatch@gafirst.org](mailto:lhatch@gafirst.org)

### ***Be a Volunteer***

- Become a Mentor or Coach.
- Organize an event or program.
- Assist at a competition.
- Make a difference in young lives.

Contact: Tiffany Dean     [tdean@gafirst.org](mailto:tdean@gafirst.org)



### ***Become a Team or Event Sponsor***

- Provide financial support, equipment, parts, facilities, internships, or other services.
- Offer scholarships.
- Encourage employees to mentor or volunteer.
- Host an event.
- Build community goodwill.
- Inspire employees.
- Help build a technical workforce.

Contact: Connie Haynes     (770) 366-5612     [chaynes@gafirst.org](mailto:chaynes@gafirst.org)

**Take the next step and contact [chaynes@gafirst.org](mailto:chaynes@gafirst.org) to get involved!**

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# PEACHTREE DISTRICT

*FIRST* Robotics Competition

