



Mississippi State University

X-cited!

Team Participates in Local Parade

Special points of interest:

- The Equinox in the Starkville Christmas parade. See adjacent article.
- See what each thrust is working on in our regular Thrust Update Area.
- Ashley Priebe is featured as this edition's Student in the Spotlight.
- A new semester begins!

The Challenge X team got in the spirit of the season in November by participating in the annual Starkville Christmas Parade.

The team members built a float pulled by the team's hybrid Equinox.

The team won "Best Use of Lights" in the judging. The team used lights to decorate the vehicle. Because the vehicle was the most important feature of the float, the team decided to use lights to accentuate it, and strung lights all

along the Equinox.

The parade featured over 90 floats and attracted a record crowd. The parade was televised and ran each Tuesday of December on a local channel.



The Equinox pulled a float of Christmas presents, lights, and smiling team members.

Thrust Update Area: What are they working on?

Vehicle Modeling and Controls

The controls team has been calibrating and optimizing different critical parameters in the control strategy.

This calibration and optimization is being done to ensure optimal drive-ability and adequate driving safety while enhancing vehicle performance and technical specifications like fuel economy, and IVM-60 acceleration time, etc.

The shifting strategy is also being tested and should be complete later in the week.

Thrust Leaders: Jimmy Mathews and Kennabec Walp

Mechanical

The mechanical group is working on constructing a new improved exhaust system, installing the new fuel pump in the tank, and working on a new air box.

Thrust Leader: Brian Christian

Electrical

The electrical group has been working with the powertrain group to repack the high-voltage battery pack.

We have also been working to procure the new traction motor that will be used for year three of the competition.

Thrust Leader: Ron Lewis

Powertrain

We have been working on designing new axle shafts for our Equinox. We have also been tying up loose ends and preparing the vehicle for June competition.

Thrust Leader: Christopher Whitt

Outreach Program

The outreach team has done several youth events at local K-12 schools.

We recently spoke to the Starkville Civitan Club at their monthly meeting.

The Equinox was exhibited in Jackson on Dec. 5 at a conference on high technology.

Outreach Coordinator: Amanda McAlpin

Upcoming Events

- January—Emissions testing at Southwest Research Institute
- February 1—Progress Report #2 due
- February 1-3—Winter Workshop in Austin, Texas
- February 7-8—SAE Hybrid Vehicle Technologies Symposium in San Diego, California

Atta-Dawgs

- Thanks to **Heather Oliveri** and **Liz Stokes** for building the Christmas float for the parade!
- Special thanks to **Teresa Stewart** for taking care of our travel and helping us with purchases!
- Thanks to alumni **Jimmy Mathews** for the PSAT software training during his return for graduation.

Good luck to all students on the spring semester!



Students in the Spotlight

This column gives you a behind-the-scenes look at the students who are working on the Challenge X competition at MSU.

This week's student in the spotlight section features Ashley Priebe, a secondary education major. Ashley has been a member of Challenge X for over a year. Ashley is the only member of the MSU team who is majoring in education, and so lends the outreach team a lot of help by organizing the youth requirements for outreach. That's why we chose her for this edition's spotlight.

Name: Ashley Priebe

Hometown: Raymond, New Hampshire

Major: Secondary Education with a focus in English

Here Ashley answers a few questions about her experience with Challenge X.

Q. What do you feel like you are gaining from being part of Challenge X?

A. Challenge X has been and is a great way to be involved with the university and the community. It has given me a

unique opportunity to interact with local schools in a way that I would not have been able to otherwise. The teamwork experience is something I will take with me into my upcoming teaching career.

Q. What has been the most memorable part of being on the team?

A. The first time I got to ride in the vehicle after the guys got it running was probably the most memorable thing for me from Challenge X. Not too many people in town had seen it, so everyone was staring at it. It was really cool.

Q. How is it different being on the team as a non-engineering major?

A. It's harder to explain what's going on with the car. I think I understand a lot of it better than I did coming into the competition last year, but I still can't explain all of it. I can't imagine being on the mechanical team-- it's very much beyond me.

Q. What do you plan to do after you get your degree?

A. I think I'm going to attend grad school for TESOL, Teaching English as a Second Language. I would like to work with adult learners eventually.



Students look at the Equinox at a visit to a school. Ashley arranges all youth outreach events.

For newsletter suggestions or corrections, please contact Amanda McAlpin at amcalpin@cavs.msstate.edu.