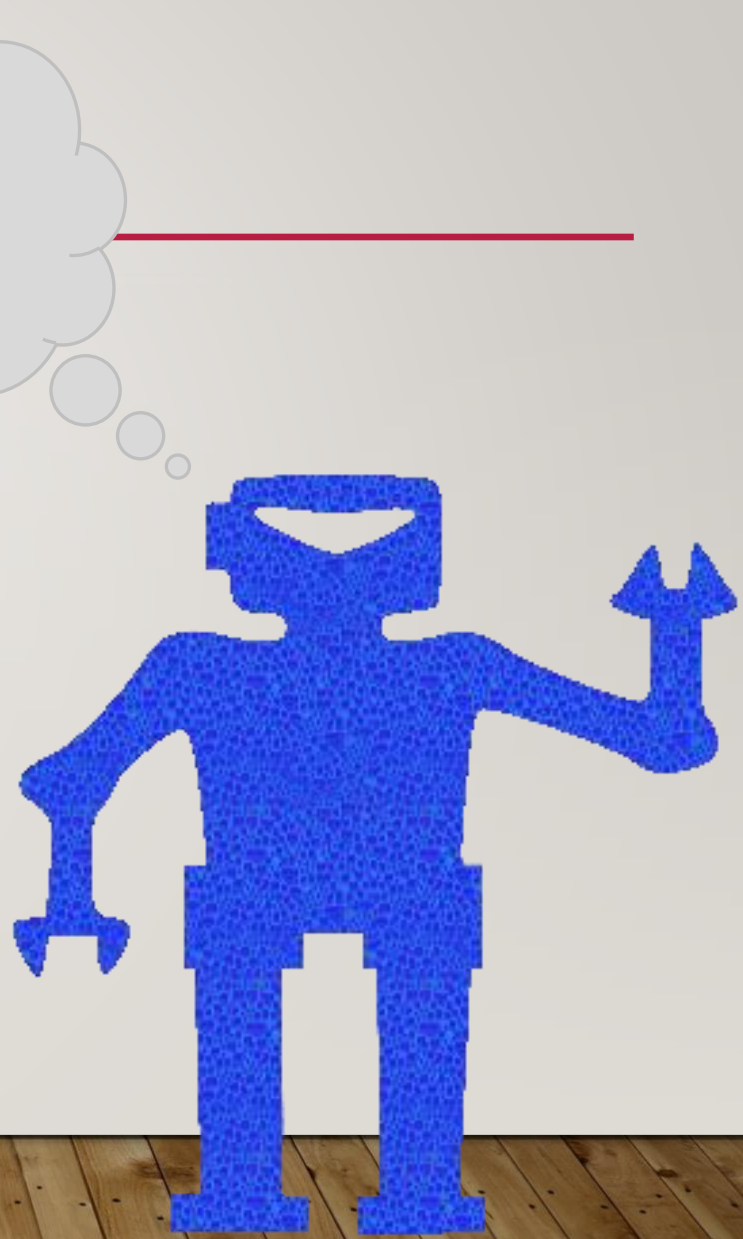
DPRG 2020 DEC 12

ABOUT DPRG

- Founded 1984
- IRS 501c
- Meet Every Tuesday Night & 2nd Saturday of each month
- Build / Putz Around / Compete / Learn / Community Outreach

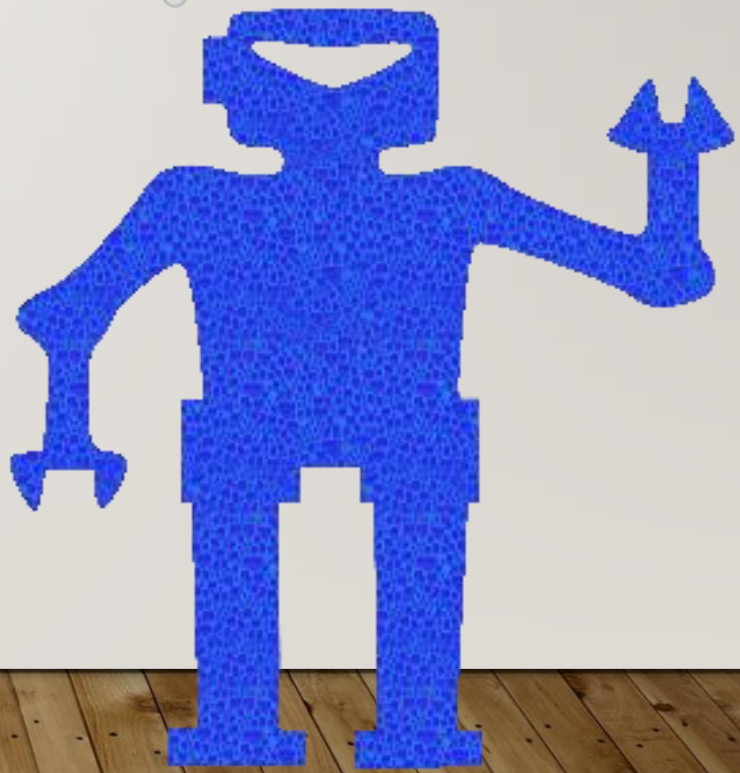
Our Quest:

- STEM for all ages
- Programming. Problem Solving & "Putting it all together“
- Sensors. Motors & Microcontrollers
- Fabrication. Cool Technologies & Building Stuff



DPRG SUPPORTERS

Thanks!



TODAY'S MEETING

- Club Housekeeping
- Free Style / Open Style Contest
- Line Following Simulation Contest
  - Beginner
  - Advanced
  - Challenge
- Awards & Prizes

CLUB HOUSEKEEPING

- 2021 Jan 9 Meeting
  - Annual DPRG Election
  - Annual Planning
- 2021 Jan 16 – Seattle Robotics Society – Virtual Sumo
  - https://robothon.org/jan-16-2021-virtual-mini-sumo-contest-event/

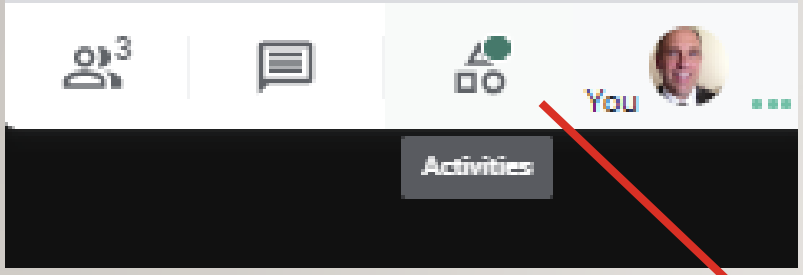
FREE STYLE / OPEN STYLE CONTEST

Contestants share a 2 to 4 minute video of their **autonomous** robot performing its function. The video should include a pitch about the features / sensors / actuators / architecture of the robot and what makes it interesting.

- Online attendees will watch the video and vote
- Prizes will go to the top scorers

Vote for Best Free Style Competitor 1/2

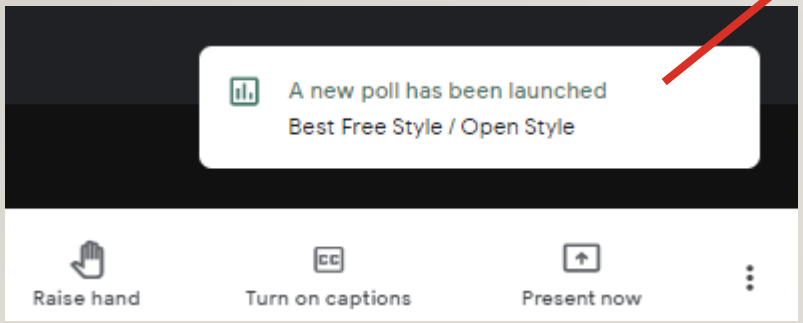
How To Vote
=> Google Meet Polls

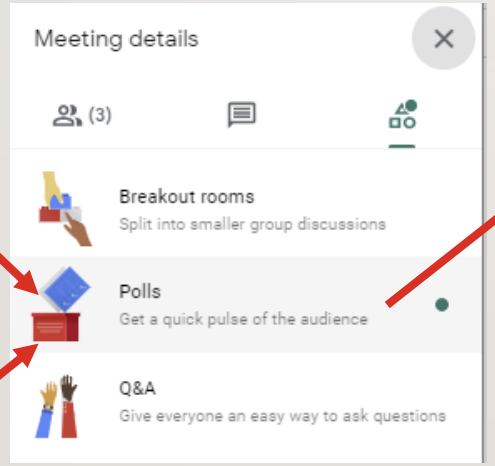


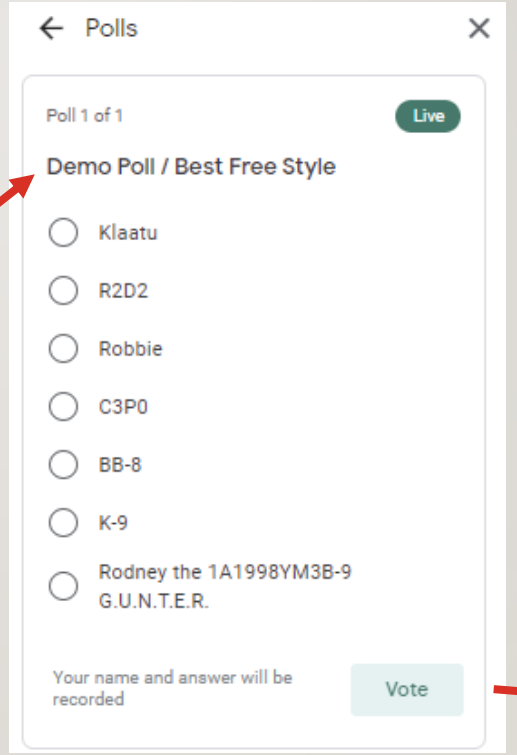
- Activites -> Polls

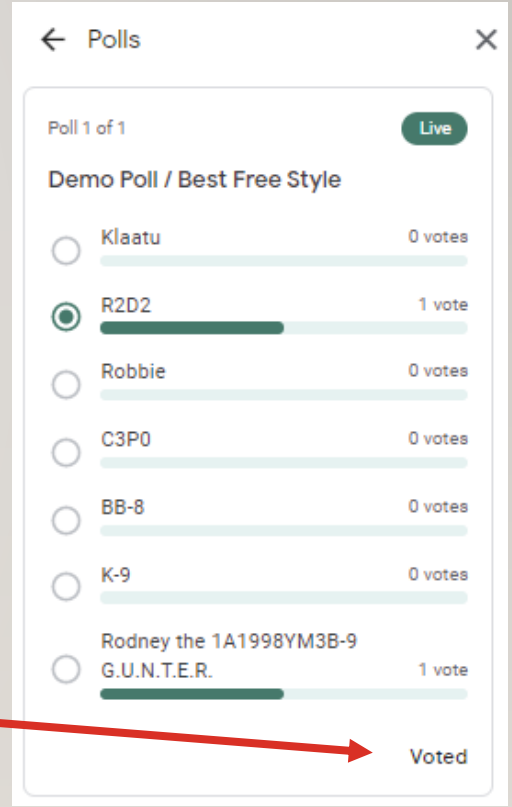
or

- Click Notification









Vote for Best Free Style Competitor 2/2

- Rules
- https://www.dprg.org/wp-content/uploads/2020/11/Free_Style-Open_Style_Competition-20201120.pdf

(rule version 20201120.00)

Objective: The competition's objective is for competitors to present short videos of their autonomous robots highlighting the function, sensors, actuators, architecture, and ingenuity of the robot design.

Competition: The competition will be live streamed at a date and time published on DPRG's website and Meetup page.

Robot: The robot may have any form and function. It must be autonomous. It must be built by hobbyist roboticists. The robot must exist in a physical form (not a design concept only).

Video: Video length may not be longer than 4 minutes. It must include a segment showing the robot performing its function. The video should emphasize the ingenuity and features of the robot. The video must be family friendly and non-political. DPRG reserves the right to not show inappropriate videos.

Play: The competitor must register a link to a video before the competition by using the registration form at https://www.dprg.org/line-follower-simulation-competition-pre-registration/. During the competition, the robot videos will be presented in the competition's Google Hangout meeting.

Scoring: Robots are ranked by the meeting's online attendees after all entries have been viewed This is an "audience favorite" competition.

Competition Recording: A video of the competition will be recorded and posted on the DPRG YouTube channel. By joining the meeting, you are giving consent to be included in the recording.

Judging: One or more judges will referee the contest. They will ensure the rules are followed. The decisions of the judges are final.

Free Style / Open Style Competitors

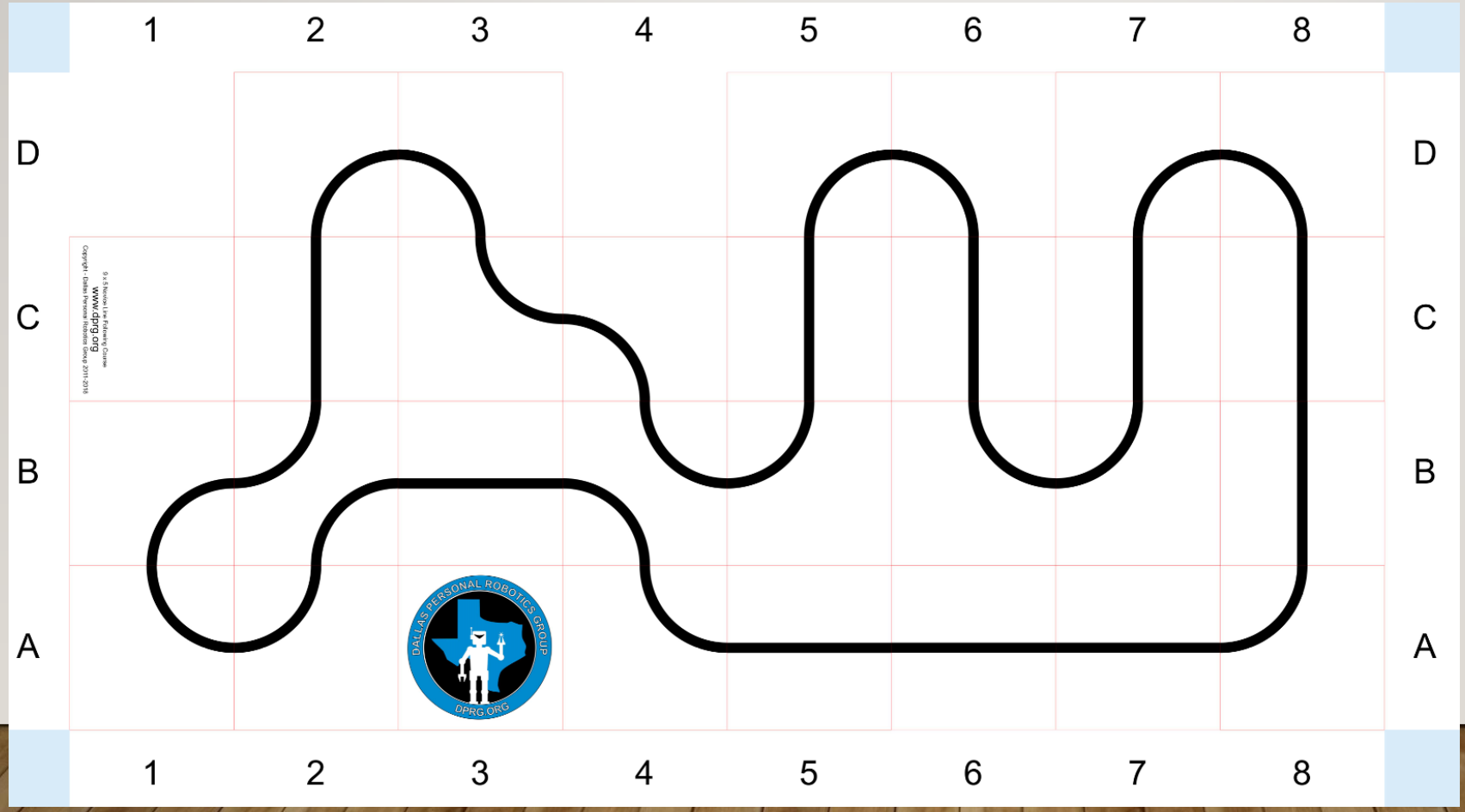
- David Anderson
  - rcat spins: https://youtu.be/87No-caHfig
  - rcat odometery test: https://youtu.be/y7VoEV_bhcs — 2nd
- Doug Dodgen
  - Robie http://www.myrobotblogs.com/Images/Blogs/53/Part-186-4.MP4
- Jesse Brockmann
  - JRover Maxx https://www.youtube.com/watch?v=4YN6mE00x10 — 1st
- Carl Ott
  - HoverSim https://youtu.be/-IPDkrrLzZY — 3rd

LINE FOLLOWING SIMULATION CONTEST

Contestants run virtual robots using an awesome line following simulator created by DPRG member Ron Grant. Each contestant will load the simulator on their computer and stream their robot's run. We'll encourage a 1 to 5 minutes description of your unique approach

- Prizes go to the robot controllers which can go the furthest, and after that who can complete the courses in the least time.
- Everybody who can complete the challenge level course will win a prize.

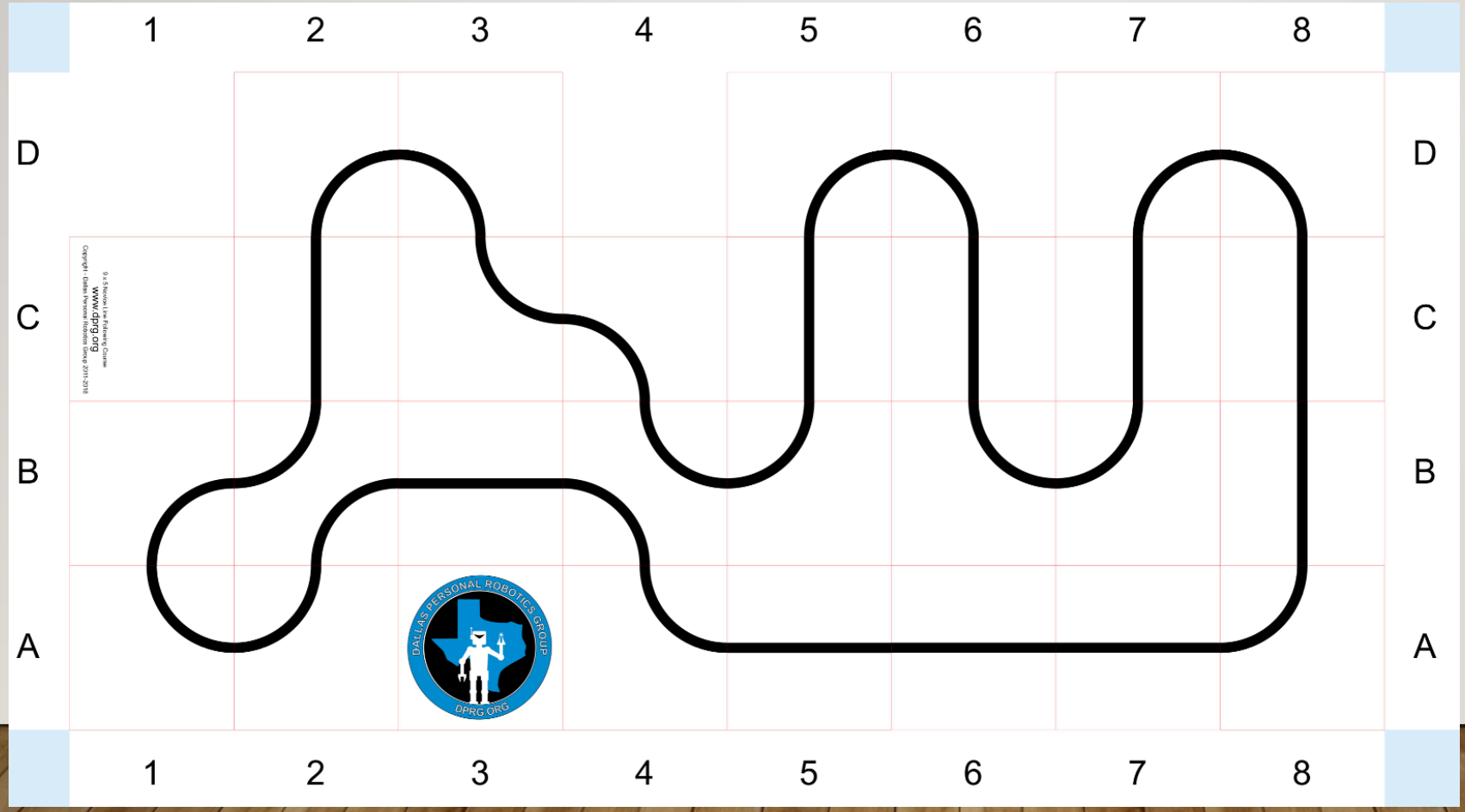
QUICK POLL - PREDICT THE FASTEST LAP TIME BASIC COURSE



Predict Fastest Lap - Basic Course	COUNTA of Predict Fastest Lap - Basic Course	
	3	no votes
	0	
Under 1 Min	3	
Under 2 Min	3	
Under 30 Sec	6	
Grand Total	**15**	

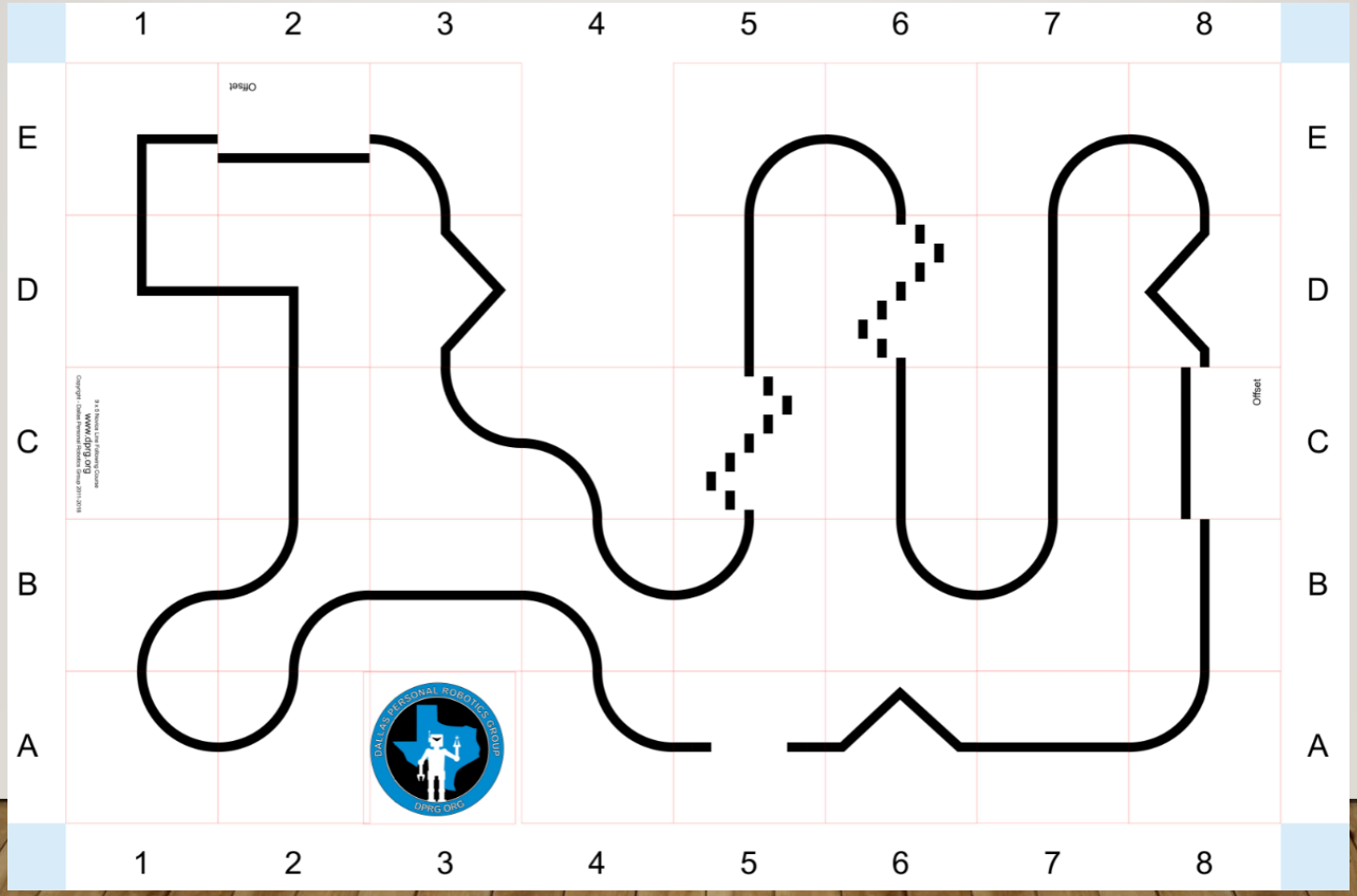
Line Following Results - Novice

- Doug Paradis 1st 14.87 sec
- Jesse Brockmann 2nd 15.4
- Ron Grant 3rd 19.1

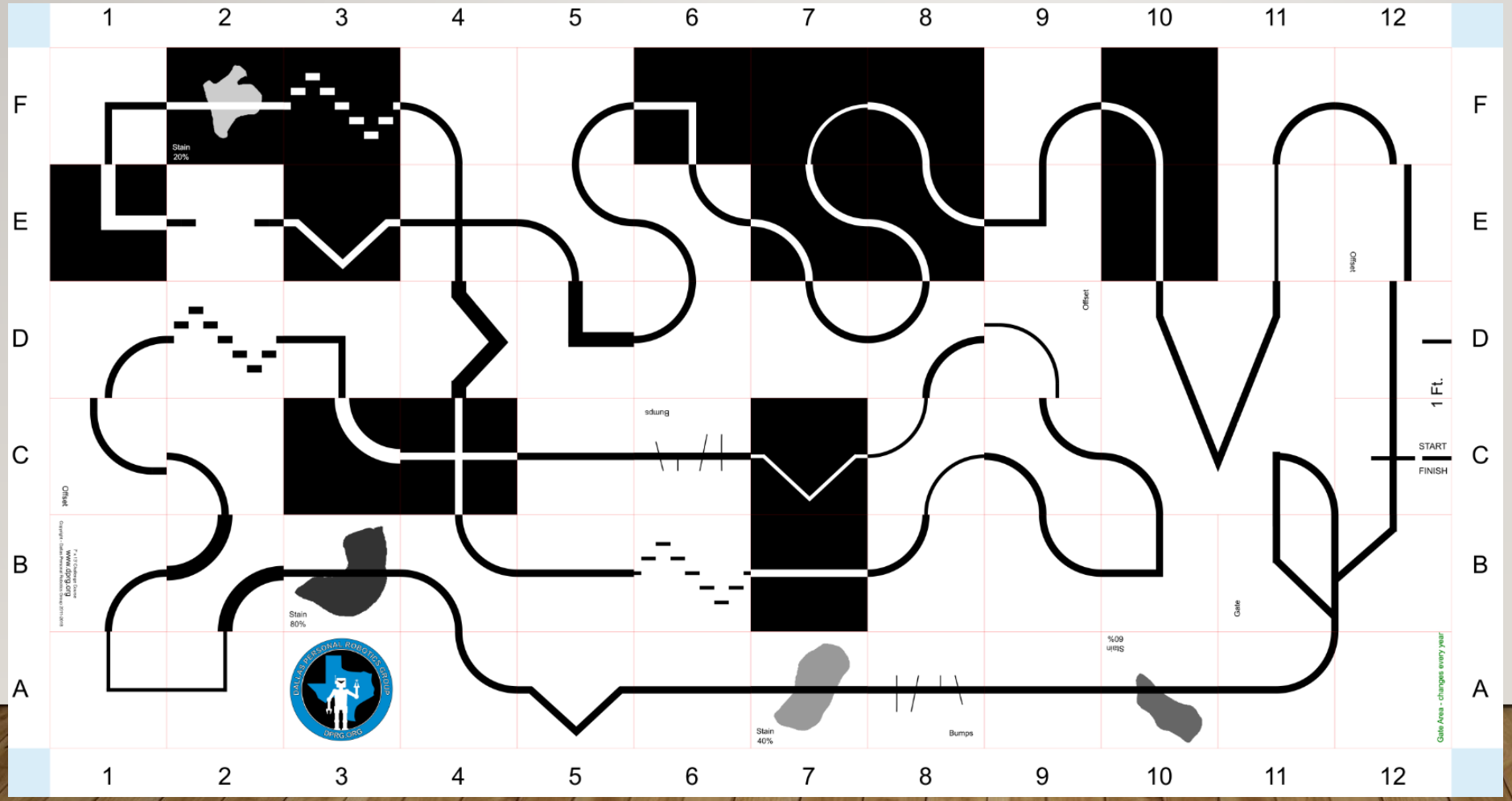


Line Following Results - Advanced

- Ron Grant 1st 31.99 sec
- Doug Paradis 2nd 43.36
- Jesse Brockmann 3rd 56



QUICK POLL - PREDICT THE FASTEST LAP TIME CHALLENGE COURSE

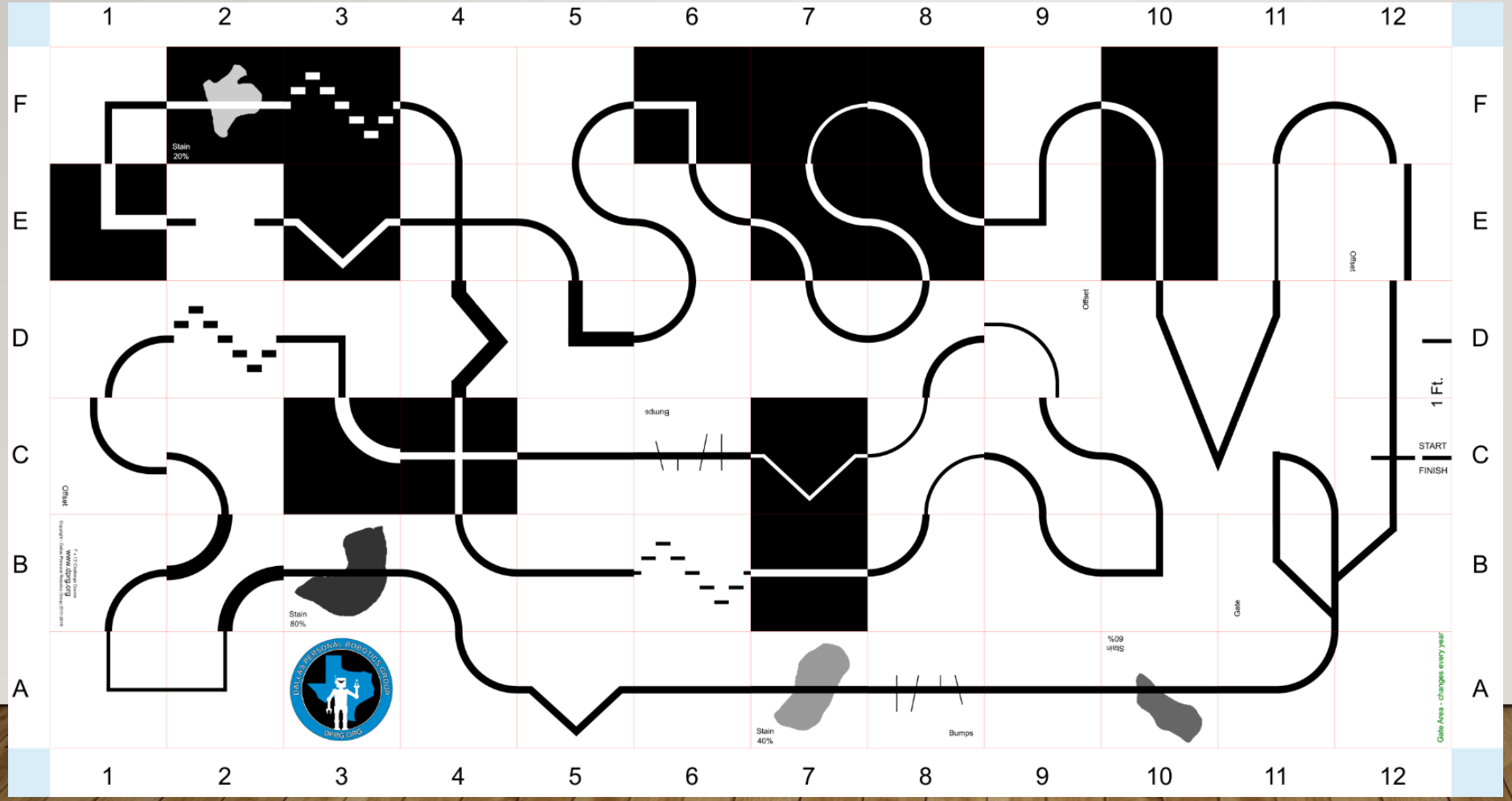


Predict Fastest Lap - Challenge Course	COUNTA of Predict Fastest Lap - Challenge Course	
	2	no votes
	0	
Under 1 Min	2	
Under 2 Min	7	
Under 3 Min	1	
Under 30 Sec	1	
Under 4 Min	2	
Grand Total	**15**	

Line Following Results - Challenge

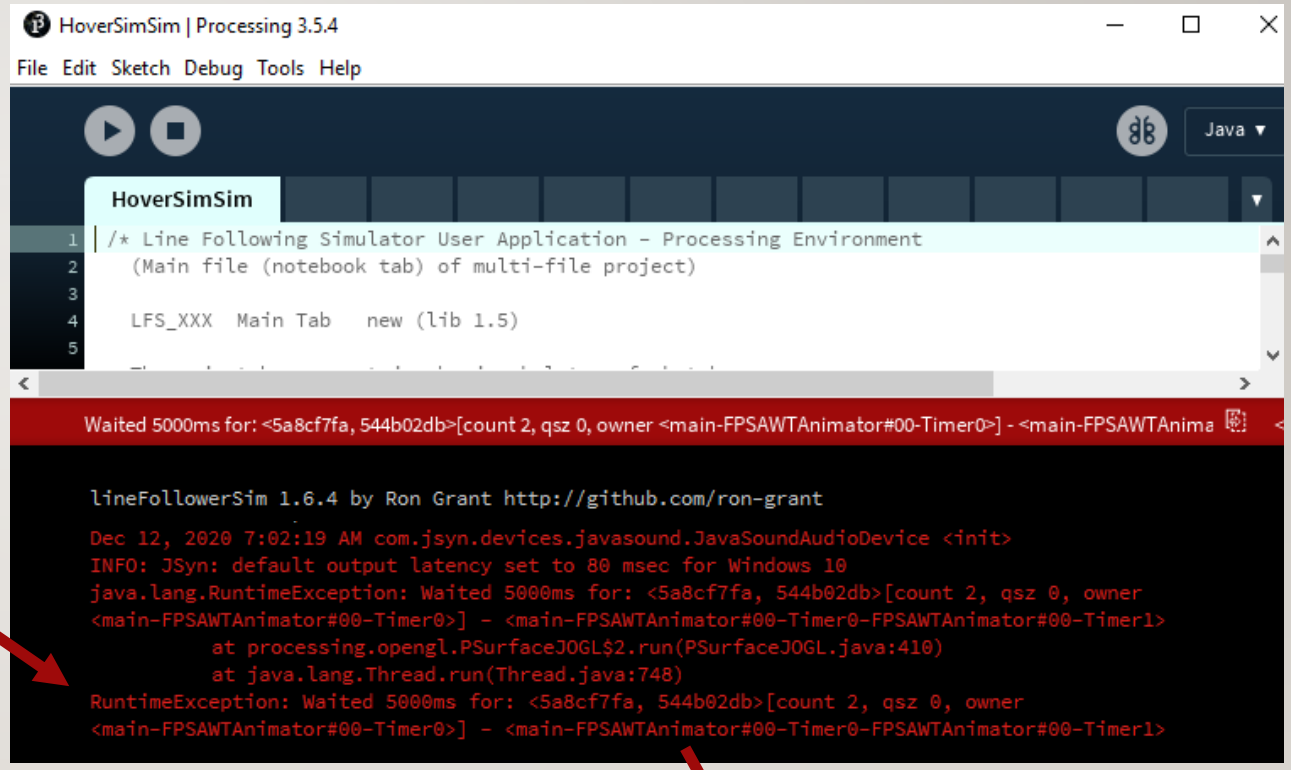
- Christian Netter — 1st — 52.1 sec
- Ron Grant — 2nd — 1.08.09
- Carl Ott — 3rd — 1.08.13

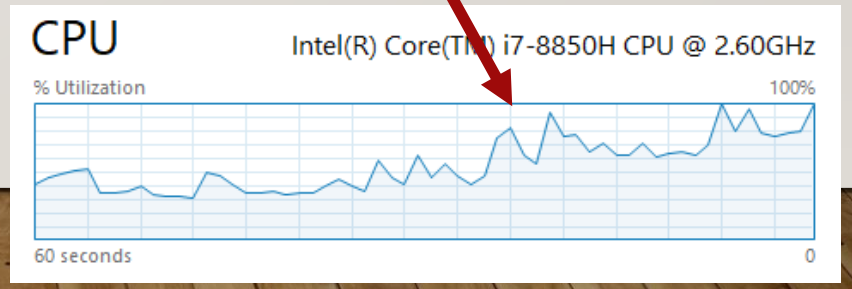
How did such dramatically different approaches yield a 40 ms difference? What are the odds?



Streaming Your Contest Run 1/2

- CPU Battle – Processing vs. Google Meet
- If Processing / LFS Hangs…





Streaming Your Contest Run 2/2

In Google Meet

1. Turn Off Your Web Cam
2. Then launch LFS
3. Then share your screen

PRIZE BOX

All Competitors
- DPRG Sticker e.g. for Laptop

FreeStyle
1. Prize Box Item Group 1
2. Prize Box Item Group 2
3. DPRG Mug || Hat || T-Shirt

Line Follower Basic & Advanced
1. Prize Box Item Group 2
2. DPRG Mug || Hat || T-Shirt

Line Follower Challenge
1. Prize Box Item Group 1
2. Prize Box Item Group 2
3. DPRG Mug || Hat || T-Shirt

PRIZE BOX – ITEM GROUP 1

Pololu QTR Reflectance Sensors

QTRX sensors
2.9 V to 5.5 V; 3.5 mA max LED current(1); 10 mm optimal range

Board width	Configuration	Max board current(2)	Max range	Output type	Name
125.0 mm	8 mm × 16	34 mA	50 mm	analog	QTRX-MD-16A
				RC (digital)	QTRX-MD-16RC
	4 mm × 31	68 mA	50 mm	analog	QTRX-HD-31A
				RC (digital)	QTRX-HD-31RC

www.pololu.com

Pololu item #: 1929
Brand: Generic
RoHS N/A

Quantity: 1
Add to cart | Add to wish list

Crimping Tool: 0.08-0.5 mm² Capacity, 20-28 AWG

This crimping tool can be used to crimp both male and female versions of our JST RCY connector crimp pins, JR crimp pins, Futaba J crimp pins, and crimp pins for 0.1" housings onto 20-28 AWG wires to make custom cables. The crimping die has a width of 4 mm, and the tool offers ratcheting action for increased consistency and ease of use.

www.pololu.com

Pololu item #: 1928
Brand: Generic
RoHS N/A

Quantity: 1
Add to cart | Add to wish list

Crimping Tool: 0.1-1.0 mm² Capacity, 16-28 AWG

This crimping tool can be used to crimp both male and female versions of our Tamiya connector crimp pins, mini Tamiya connector crimp pins, JST RCY connector crimp pins, JR crimp pins, Futaba J crimp pins, and crimp pins for 0.1" housings onto 16-28 AWG wires to make custom cables. The crimping die has a width of 7 mm, and the tool offers ratcheting action for increased consistency and ease of use.

iMAX B6AC V2 Balance Charger and Discharger

Pololu item #: 2588 — 75 in stock
Brand: SkyRC
✓RoHS 3

Quantity: 1
Add to cart | Add to wish list
backorders allowed

PRIZE BOX – ITEM GROUP 2

Mechanical Components » Wheels » Scooter/Skate Wheels »

Scooter/Skate Wheel 100×24mm - Black

Pololu item #: 3278 **202** in stock
Brand: Generic
✓RoHS 3

Quantity: 1 Add to cart
Add to wish list

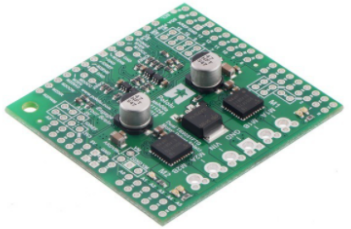
Hardware » Motor Shaft Adapters » Pololu Aluminum Scooter Wheel Adapters »

Pololu Aluminum Scooter Wheel Adapter for 4mm Shaft

Pololu item #: 2672 **579** in stock
Brand: Pololu
Status: Active and Preferred
✓RoHS 3
Free shipping in USA over $60

Quantity: 1 Add to cart
backorders allowed
Add to wish list

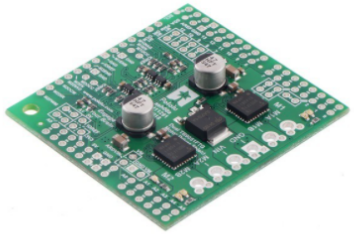
Dual TB9051FTG Motor Driver Shield for Arduino



Pololu item #: 2520 **81** in stock
Brand: Pololu
Status: Active and Preferred
✓RoHS 3
Free add-on shipping in USA
Free shipping in USA over $40

Quantity: 1 Add to cart
backorders allowed
Add to wish list

Dual TB9051FTG Motor Driver Shield for Arduino



Pololu item #: 2520 **81** in stock
Brand: Pololu
Status: Active and Preferred
✓RoHS 3
Free add-on shipping in USA
Free shipping in USA over $40

Quantity: 1 Add to cart
backorders allowed
Add to wish list

Tic 36v4 USB Multi-Interface High-Power Stepper Motor Controller

Pololu item #: 3140 **112** in stock
Brand: Pololu
Status: Active and Preferred
✓RoHS 3
Free shipping in USA
Free add-on shipping in USA

Quantity: 1 Add to cart
backorders allowed
Add to wish list

DALLAS PERSONAL ROBOTICS GROUP

AWARD FOR EXCELLENCE

PRESENTED TO

RON GRANT

DEC 2020

IN RECOGNITION OF LONG TERM
OUTSTANDING CONTRIBUTIONS TO DPRG
AND
IN SPECIAL APPRECIATION
FOR CREATING, PROVIDING & SUPPORTING
LFS / LINE FOLLOWING SIMULATOR