

Fundamentals of Coaching in FRC



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Fundamentals of Coaching in FRC

Building a Drive team

First Match Prep

In-Match Conduct

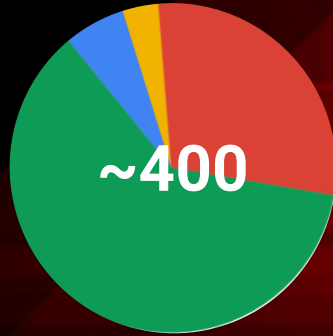
Post-Match Debrief

Coaching an Alliance

How to handle Wins and Losses

Time-sensitive Decisions

Einstein Finals 3 Breakdown



As a coach, what is my job?

- Train and grow with your drive team
- Be the translator between strategy and drive team
 - Make sure the match goes as planned
- Prepare drive team for anything they might encounter
- Make macro calls within a match
- Make changes based on events in a match
- Communicate important information to other coaches
- Be the emotional leader on drive team

“I think the most important thing about coaching is the you have to have a sense of confidence about what you are doing. You have to be a salesman, and you have to get your players, particularly your leaders, to believe in what you’re trying to accomplish on the basketball floor”

- Phil Jackson, NBA Coach, 13 rings

Designing a Drive team

- Define your roles
- Drive team should be co-operative and hardworking
 - Driver
 - Driving - 2 sticks
 - Manual shifting
 - 1 non-refined mechanism -> game piece intake / release
 - Operator
 - Game piece scoring and/or end game sequence
 - Any other mechanisms
 - "Micro" coach
 - Human Player
 - Autonomous leader with other HPs
 - Slight communication to drive team
 - Independent decisions without guidance



Build on trust

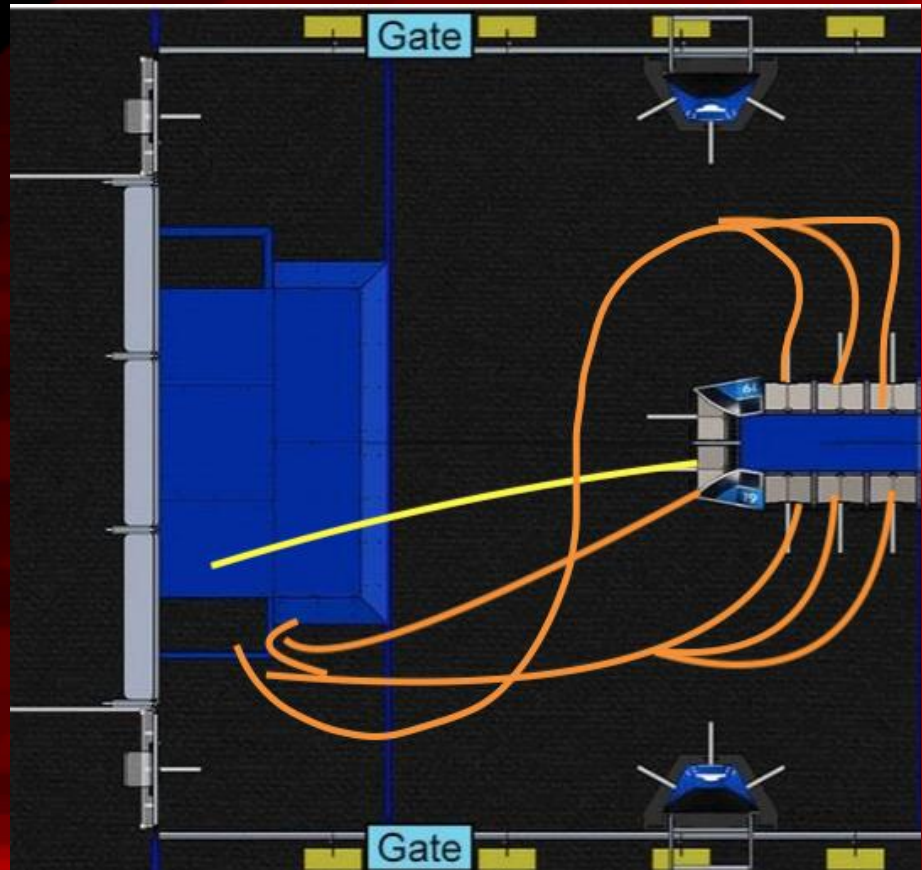
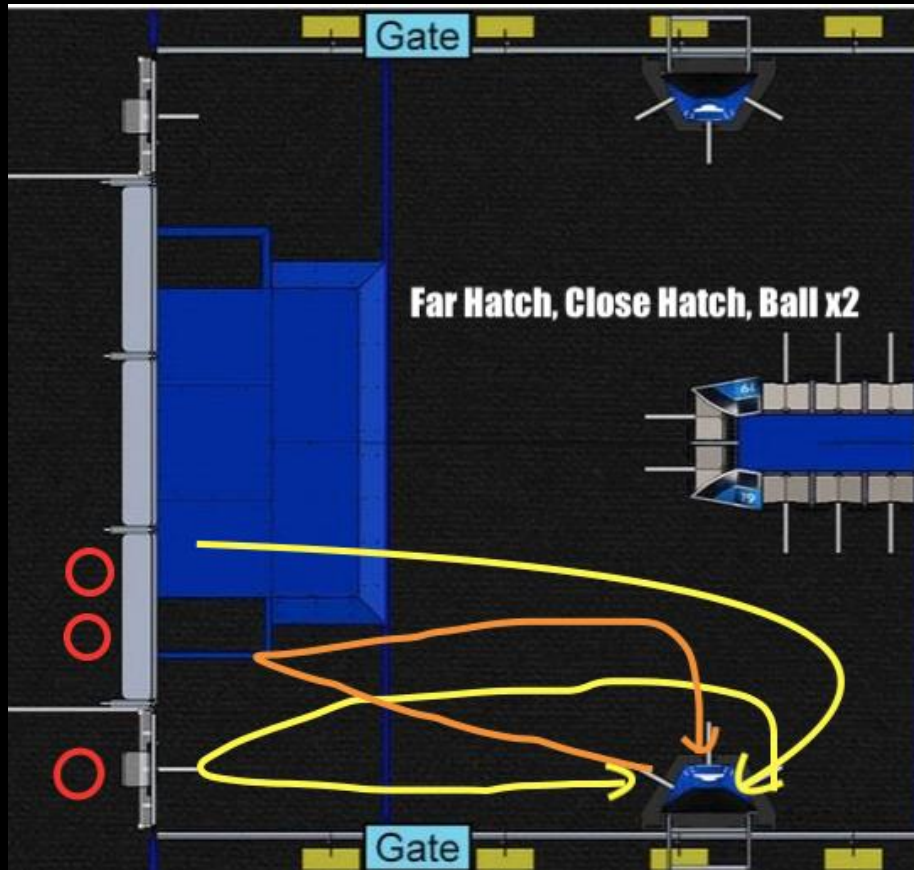
- You have to trust them; they have to trust you
- Create an environment focused on the common objective
- Iron out everyone's responsibilities
- Spend a lot of time on getting better
 - Confidence boost after progress
 - Criticism is welcome for improvement
- Friendship creates better chemistry
- Equal respect amongst team members





Practice, Practice, Practice

- Create drills and detailed paths
 - Do it 20 times
 - Do it 20 more times
 - Do it 20 more times after that
- Start simple, Give feedback
- Define your commands with drivers
- Once comfortable, time cycles / matches
- Be present at practice
- Video Review allows you to clean up mistakes

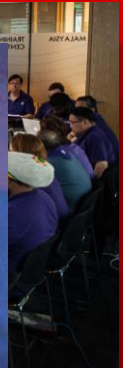


Routine vs Adaptability

- Depending on scoring and Ranking Point
- Routine increases consistency while Adaptability increases opportunity
- Focus on routine to start
 - Build confidence and recognizability
 - Amount of routine depends on robot capability
- Master routine first, add adaptability after
 - Scoring out of comfortable vision
 - Opposite station intake
 - Defense out of vision
- Practice Defensive calls



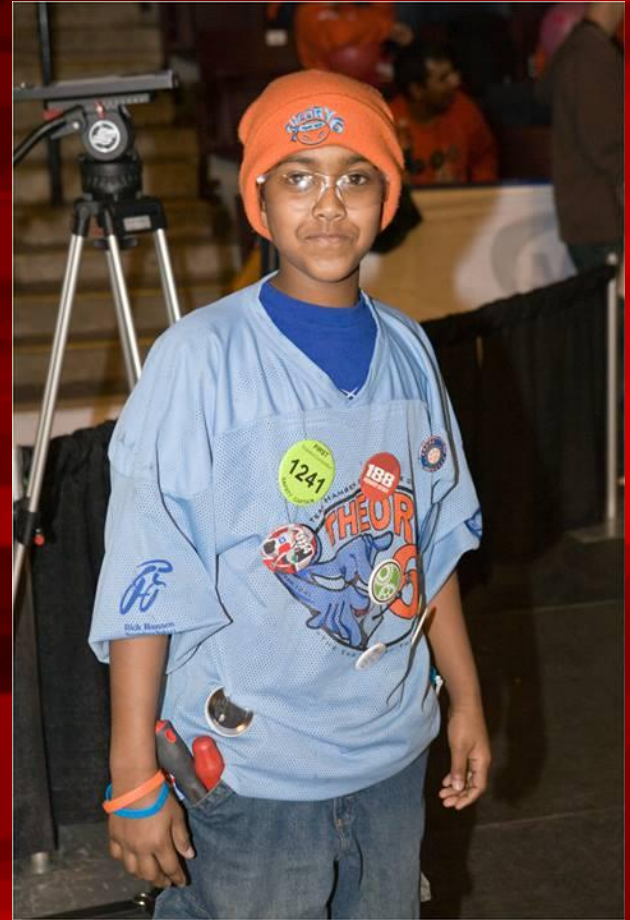
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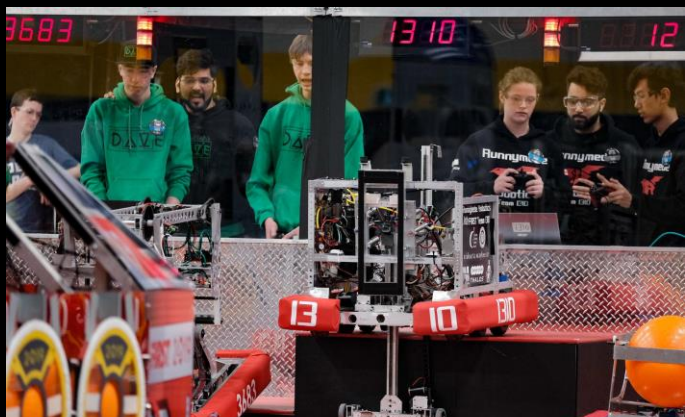




First Match Coaching

- Make sure your drive team understands the plan
 - What do they need to do?
 - Where do they have to go?
 - Who do they have to know about?
- Figure out key moments where you might speak
- Focus on comfort - get used to giving directions
- Keep calm and concise
 - Avoid shouting and signs of de-stress
 - More words != more actions
 - Short commands with confidence
- Stay with your team
- Avoid quick changes
- Observe mistakes for debrief





In-Match Coaching

- Don't get lost in your team
 - Short sprints on darting
 - Don't forget your Human Players
- Make sure everyone is following the plan
- You are in charge of role changes for your team
- Update Alliance on any important information
- In elims, direct any adapting roles for the alliance
- Keep alliance calm if you sense panic



Post-Match

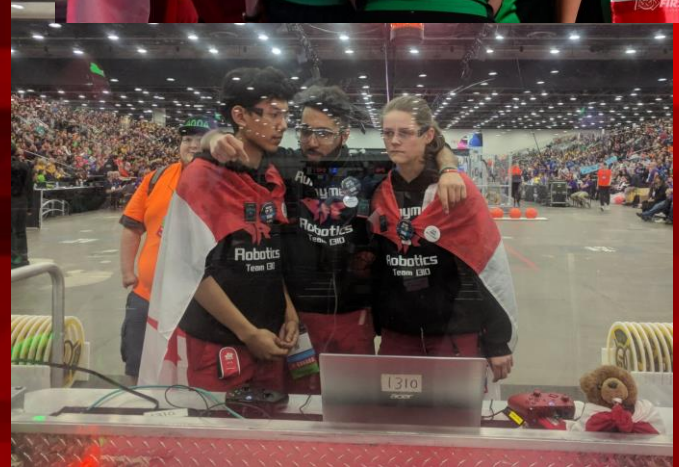
- 2-3 Debriefs
 - Strategy / Scouting
 - Drive Team
 - If in elims, with alliance partners
- Watch matches with strategy; discuss possible improvements
- Bring improvements to drive team, discuss possible solutions
 - Debriefing drive team should be limited to a small group of people
 - If it's a big mistake, make sure the drive team is focussed on the next match
- Bring changes to alliance, assign each coach responsibility for a change
- After a lose, don't race to change everything

Coaching the Alliance

- Make sure your alliance is **focused** and **confident**
- Pre-match, Be Repetitive - Repeating emphasizes importance
 - If confident, repeat to your partner pre-match what their job is
 - Occasionally “Gas them up”
 - In situations you are not confident, allow them the opportunity to explain
 - Positive reinforcement when they are right
 - Correct any mistakes but relay confidence in them
- Your alliance members are on your team, everyone has the same goal
- Quick directions within match
- Coordinate with teams on how to deal with weaknesses

Leadership

- This starts with training your drive team
- Own decisions on / off the field
 - Mistakes happen, take ownership of them
- Reciprocate confidence into your drive team
- Don't be unreasonable, don't act out in anger
- Take on the responsibility of making your drive team better
- Within a alliance, building trust will allow your team to contribute in match planning
- Wisdom is always an outmatch for strength
- Phil Jackson, again



You Win Some



- High fives, “good jobs”, “keep it up”
- Don’t overvalue a win. Every series is Bo3
 - “We haven’t won anything yet”
- Focus focus focus focus
- Feed off the win in match planning
 - “You’ve done it before” mentality
 - Huddles are nice to have
- Don’t let a win distract you from your routine
 - Debrief
 - System Check
 - Review the plan



You Lose Some

- Focus focus focus focus
- Review footage before debrief
- Risk of changes should match probability of winning
 - Close lose? Make high probability changes
 - If it wasn't close, go wild
- High Team Morale
 - Huddle Speech
 - Reinforce confidence during debrief
- Following a series lose - stay with drive team if comfort is needed
- Most loses don't last in people's minds



But my robot is broken, what do I do?

- Do not show panic to your drive team
- Communicate issue to other coaches
- Stay calm and think through your next move - usually defense
- Think about how your goals change in the match, direct team accordingly
 - How do you win this match?
 - Can you still get the RP?
 - Who will take the parts of my role?
- Continue to watch for any issues with plan



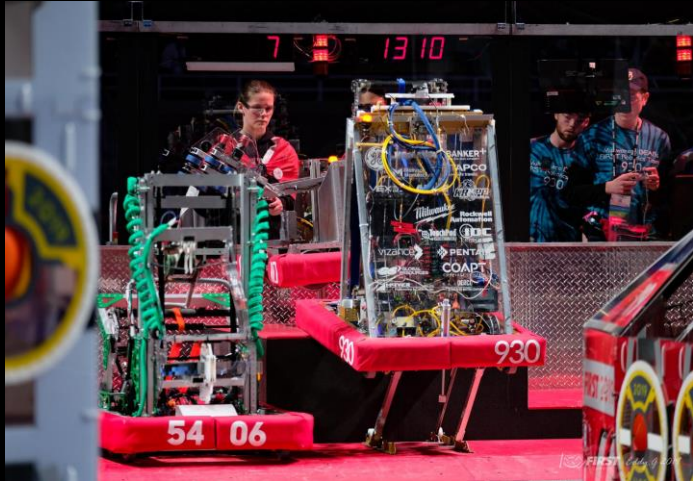
FIRST

Qualification 25 of 114

oit - Archimedes Subdivision

DESTINATION: DEEP SPACE Powered by Motorware





Clutch Calls

- Usually, time-sensitive calls follow prep from strategy
- Before match, go through possible scenarios
 - Simple “If this then that”
- What information do I need to confidently make this call?
- How long do I have to make this decision?

Case Study - 2017 St. Louis - Einstein Match 6



- Red Alliance is one gear away from completing their “Airship”
- A completed Airship is worth 140 pts
- A climb is worth 50 pts
- Thuvishan (1241’s Coach) was prepared for a situation where the red alliance would be completing their Airship near the end of the match
- Thuvishan was able to find where the remaining gear was, and as planned, opted to defend the gear in sacrifice of his climb.



FIRST

Einstein 6 of 15

FIRST Championship - St. Louis



1796
125
5687
CARS

51
184

175

2056
384
1241
CURE



Scoreboard quiz

Calculate who is winning and by how many points. Fastest answer wins.

Example of an answer: "Red 3!" -> Red won by 3 points

Remember: Orange -> Ball = 3 pts, Yellow -> Hatch = 2 pts



Qualification 101 of 114

ST Championship - Detroit - Arc

DESTINATION: DEEP SPACE Presented By BOEING

6		3
6		6

	3
	0

7617	9	930
2054	?	5676
910		1310

7	
4	

2		3
2		5



 **FIRST**

Qualification 31 of 66

ONT District North Bay Event

DESTINATION:
DEEP SPACE Presented By


0		0
1		2

	6
	3

6987
7052
1305

5

?

7267
1310
5672

8	
2	

0		0
0		2



FIRST

Einstein 13

FIRST Championship - Detroit

DESTINATION:
DEEP SPACE Presented By **BOEING**

2		4
2		4

	7
	4

CARS
111
2052
5050

11
?

ARCH
930
1310
5406

7	
1	

2		5
4		5



FIRST

Einstein Final Tiebreaker

FIRST Championship - Detroit

DESTINATION: DEEP SPACE powered by AMERICAN IDOL

2		2
3		2

	6
	1

ARCH
930
1310
5406

71
57
56

DARW
3707
4481
217

5	
3	

3		0
4		3

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