FTC Coaches Webinar
League Play for Coaches and Organizers

Patrick R. Michaud
*pmichaud@pobox.com*

University of Texas at Dallas
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## Topics in this webinar

Fundamentals of FTC League format

Team and Event scheduling

Event resource requirements (venue, equipment, volunteers, finances)

Training and certification requirements

Other topics and Q & A

## Disclaimers

This webinar is not authoritative

I have no official authority within the North Texas Region

This information is my best interpretation of League Play based on experience and available resources

For official viewpoints/decisions/information, contact the Affiliate Partners for North Texas

## League format

10-16 teams that compete in multiple events leading to a League Tournament

*League Tournament* is equivalent to a Qualifying Tournament

- Full day event

- Judging, robot game, awards, and advancement

- Robot game rankings are initialized with teams' top ten matches played in prior League Meets

*League Meets* are one-field competitions without judging, awards, or advancement

# League planning guides

Tournament Planning Guide



League Meet Guide



Most guides are available from the FTC Volunteer Resources page:
http://www.firstinspires.org/resource-library/ftc/volunteer-resources

## League organization

Regional Partner (UTA) issued draft league assignments on September 30

Four (five?) draft leagues

Emerald, Garnet, Sapphire, Topaz

18-22 candidate team entries from FTC HQ registration

Generally drafted by location

Some ISD teams "opted out" of league play

Coaches in each league are responsible for organizing and hosting all events in their league

League Committee and/or League Coordinator

## League organization tasks

Determine which teams are participating

Mutually create a schedule for League Tournament and League Meets

Identify event venues

Order/collect event equipment and supplies

Recruit, screen, train, certify Volunteers

Execute events and report results to teams and Regional Partner

## Scheduling considerations

League Tournament:

- Full-day event (same as a qualifier)

- Must be completed by February 4

- All teams must be able to attend

- May want to carefully consider conflicts with other events
  - Other FTC qualifying tournaments
  - Holidays
  - SAT exams (Jan 21)
  - FLL Championship (Feb 4), other UIL events

- Likely to be one of Jan 21, Jan 28, or Feb 4

## Scheduling considerations

League Meets:

Typically a 4-6 hour event

Saturday mornings or afternoons

(Weekday / after school meets?)

"...must provide enough League Meets so that each Team can participate in at least three." (LMG)

Often have to start in October or early November

Can do two back-to-back Meets in one day

(only one two-Event day every two weeks allowed)

Consider school district lead time requirements

(e.g., bus reservations, off-site event permission forms)

# Calendar of Saturdays, Oct 2016 – Feb 2017

| | | | | | |
|-----|---|----|----|----|----|
| Oct | | 15 | 22 | 29 | |
| Nov | 5 | 12 | 19 | 26 | |
| Dec | 3 | 10 | 17 | 24 | 31 |
| Jan | 7 | 14 | 21 | 28 | |
| Feb | 4 | | | | |

# Potential conflicts, Oct 2016 – Feb 2017

| | | | | | |
|-----|---|----|----|----|----|
| Oct | | 15 | 22 | 29 | |
| Nov | 5 | 12 | 19 | 26 | |
| Dec | 3 | 10 | 17 | 24 | 31 |
| Jan | 7 | 14 | 21 | 28 | |
| Feb | 4 | | | | |

⬡ Holidays / holiday weekend

# Potential conflicts, Oct 2016 – Feb 2017

|       |     |     |     |     |
|-------|-----|-----|-----|-----|
| Oct   |     | 15  | 22  | 29  |
| Nov   | 5   | 12  | 19  | 26  |
| Dec   | 3   | 10  | 17  | 24  | 31 |
| Jan   | 7   | 14  | 21  | 28  |
| Feb   | 4   |     |     |     |

Holidays / holiday weekend

SAT examination dates

FLL competitions

FRC kickoff

BEST competitions

These conflicts may also affect volunteer availability

League Tournament

# League Tournament

A League Tournament, (formerly called League Championship Tournament) for a State or Regional Event is the culminating event for League Play.

Same as a Qualifying Tournament, *except...*

> The Scoring System takes the top ten values for Qualifying Points and the corresponding 10 values for Ranking Points for each Team [from League Meets] to determine the starting Qualifying Points and Ranking Points for each Team.

# League Tournament preparation

## Overall Tournament Planning

- Tournament Planning Committee
- Tournament Planning Project Subcommittees
- Timeline

## Finances

- Finance Committee
- Timeline
- Budget
- Funding
- Sponsors
- Income & Expenses

## Venue

- Venue Committee
- Timeline
- Needs Checklist
- IT Equipment & Needs
- Accessibility
- Date Selection
- Parking
- Security & Safety
- Map & Layouts

## Volunteers

- Volunteer Committee
- Timeline
- Event Leadership
- Volunteer Coordinator
- Volunteers
- Finding Volunteers
- Registration & Screening
- Training
- Communication
- Recognition

## Teams

- Teams Committee
- Timeline
- Advancement Criteria
- Registration & Fees
- Communication

## Event Day

- Event Day Committee
- Schedules
- Logistics
- Event Setup
- Static Mitigation
- Printing Needs
- Signs
- Registration
- PR/Media/VIPs
- Safety
- Food
- Ceremonies & Awards
- After the Event

# League Tournament Volunteers (12 team event)

## Key Volunteers:

Volunteer Coordinator
Head Referee*                          Lead Hardware Insp* (1)
Field Technical Advisor*               Lead Software Insp* (1)
Lead Scorekeeper*
Judge Advisor (1)*

## Volunteers:

Referees* (4+)                         Hardware Insp* (2)
Judges* (4+)                           Software Insp* (2)
Pit Manager                            Registration / Check-in
Queuers (2-4)
Emcee
Load-in/Setup (10)
Load-Out/Teardown (10)                 * = Training and Certification Required
                                           prior to event

# Volunteer Guides



2016-2017 *FIRST* Tech Challenge
Judge and Judge Advisor Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101



2016-2017 *FIRST* Tech Challenge
Field Technical Advisor Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101



2016-2017 *FIRST* Tech Challenge
Emcee and Game Announcer Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101

2016-2017 *FIRST* Tech Challenge
Referee and Head Referee Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101

2016-2017 *FIRST* Tech Challenge
Field Inspector Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101

2016-2017 *FIRST* Tech Challenge
Scorekeeper Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101

2016-2017 *FIRST* Tech Challenge
Robot Inspector Manual

www.firstinspires.org
200 BEDFORD STREET ■ MANCHESTER, NH 03101

# League Tournament Venue (12 team event)

Competition area:

- Space for 1 field, DJ, scoring table, video projection, seating for spectators
- Reliable power for scoring table and video projection
- No WiFi communication interference (WiFi suppressors)

Pit area:

- Space for a 6' table per team, pit administration table, practice field
- Electricity for charging stations
- Proximity to competition area, good queuing path

Judging:

- Judging rooms with seating for judges and room for teams
- Judges' deliberation room

# League Tournament Venue (12 team event)

Lunch:

    Tables and chairs for teams to eat

    Concession stands?

Volunteer room:

    Space to store personal belongings, food, tables

Parking

# League Tournament Equipment (partial list)

Official field (perimeter, floor tiles, game elements, taped sections for drivers. batteries)

Practice field

Scorekeeping computer (with printer and results from League Meets)

Timekeeping computer (with display and sound for field)

Video projector for match results and team ranking displays

Tables and chairs
  Queuing, Scorekeeping

Robot sizing boxes

Alliance flags

Particle counters for referees

Scoresheets, inspection sheets, judging sheets

P/A system for competition and pit area

Trophies and awards

Power strips for Pit Area charging stations

# League Tournament Event Day (12-team event)

| Time | Item | Notes |
|---|---|---|
| 6:00am | Volunteer Check-In begins | Be prepared to respond to early arrival Teams |
| 7:00am | Team Check-In begins | |
| 7:00am | Team Load-In | |
| 7:00am | Robot Inspection | Budget time for all Teams, including the last Teams through to pass Inspection. Time for practice Matches, on a first come-first served basis (this is optional and the Event organizer may choose to allow Teams a practice Match at the same time they are completing the Field Inspection). |
| 7:30am | Judging | Schedule each Team 20 minutes to complete Judging Interviews.<br>• Judging sessions MUST be completed prior to scheduled Matches<br>• Judging sessions MUST be at least 10 minutes long |
| 10:00am | Drivers Meeting | Have Teams competing in first 2-3 Matches bring Robots to Mtg to Place on the Field/Queue up immediately after the Mtg; approximately 30 minutes long |
| 10:30am | Opening Ceremony | Approximately half an hour long |
| 11:00am | Qualifying Matches | • Your schedule should account for 8 minutes minimum each Match, and longer if your Event is earlier in the season, with one Competition Field<br>• Time will vary based on number of Teams competing at the Event.<br>• Calculate Match time by using the Match Time Calculator. |
| 11:30am | Non-Essentials Vols | Send to Lunch to facilitate smooth transitions |
| 12:00-1:00pm | Lunch Break | A minimum 30 minutes required |
| 12:45pm | Queue Teams | To Field for 1pm Matches |
| 1:00pm | Qualifying Matches | See notes above |
| 2:00pm | Alliance Selection | Approximately 15-30 minutes long. An Event with 20 Teams or less will have 2 Team Alliances in the Semi-Finals and Final Rounds. An Event with 21 Teams or more will have 3 Team alliances in the Semi-Finals and Final Rounds. |
| 2:30pm | Semifinal Round I | approximately 30 minutes long |
| 3:00pm | Semifinal Round II | approximately 30 minutes long |
| 3:30pm | Final Rounds | approximately 30 minutes long |
| 4:00pm | Closing Ceremony | approximately 30 minutes to one hour long |
| 4:30pm | Team Load-Out | Use a separate, rested crew and this process will go fast. |

## Match time calculation

All of the example schedules in the event guides "shortchange" the time needed for matches (they're self-contradictory).

*Match cycle time* is the time between successive matches:

  Move teams to field
  Set up robots for play (incl. troubleshooting)
  Announce teams
  Play the match
  Pause between autonomous and teleop
  Score the match
  Clear and reset field

# Match time calculation, per Guides

One-field event:  12 minute cycle time minimum

Two-field event:  7 minute cycle time minimum

Events earlier in the season require more time

Events with smaller numbers of teams require slightly more time

Calculation:

   ___ Teams x 5 Matches / 4 Teams per Match
      = ____ matches x ____ mins per Match
      = ____ minutes

# Time needed for 5 qualification matches

| # of Teams | # of Matches | 1 Field 12-min cycle time | 2 Fields 7-min cycle time |
|---|---|---|---|
| 10 | 13 | 156 min (2h36) | * |
| 11 | 14 | 168 min (2h48) | * |
| 12 | 15 | 180 min (3h00) | * |
| 13 | 17 | 204 min (3h24) | * |
| 14 | 18 | 216 min (3h36) | * |
| 15 | 19 | 228 min (3h48) | * |
| 16 | 20 | 240 min (4h00) | 140 min (2h20) |
| 17 | 22 | 264 min (4h24) | 154 min (2h34) |
| 18 | 23 | 276 min (4h36) | 161 min (2h41) |
| 19 | 24 | 288 min (4h48) | 168 min (2h48) |
| 20 | 25 | 300 min (5h00) | 175 min (2h55) |
| 21 | 27 | | 189 min (3h09) |
| 22 | 28 | | 196 min (3h16) |
| 23 | 29 | | 203 min (3h23) |
| 24 | 30 | | 210 min (3h30) |

# A team note about match timing

In smaller events (16 teams or less), teams do not get much repair time in the Pit Area

Teams will often have back-to-back or nearly back-to-back matches

Consider a match schedule for 12 teams

| Match | Red 1 | Red 2 | Blue 1 | Blue 2 |
|-------|-------|-------|--------|--------|
| 1 | 1111 | 2222 | 3333 | 4444 |
| 2 | 5555 | 6666 | 7777 | 8888 |
| 3 | 9999 | 10010 | 11011 | 12012 |
| 4 | ?? | ?? | ?? | ?? |

At least one team from Match 2 or Match 3 will play in Match 4 (i.e., is immediately queued)

League Meets

## League Meet

A League Meet is a one-Field Competition without judging.

League Meets use the same Field and Game as other Tournaments.

A League Meet is a half-day event, including set-up, Inspections, five or six Matches per Team, and tear down.

Robots must pass Hardware, Software, and Field Inspections.

League Meet events do not include Elimination Rounds, and do not include official Judging

# League Meet Volunteers (12 team event)

## Key Volunteers:

Head Referee*

Field Technical Advisor*

Lead Scorekeeper*

Lead Hardware Insp* (1)

Lead Software Insp* (1)

## Volunteers:

Referees* (4+)

Queuers (2-4)

Load-in/Setup (10)

Load-Out/Teardown (10)

Hardware Insp* (2)

Software Insp* (2)

Registration / Check-in

\* = Training and Certification Required prior to event

# Volunteer Guides



2016-2017 FIRST® Tech Challenge
Referee and Head Referee Manual



2016-2017 FIRST® Tech Challenge
Field Technical Advisor Manual



2016-2017 FIRST® Tech Challenge
Scorekeeper Manual



2016-2017 FIRST® Tech Challenge
Robot Inspector Manual



2016-2017 FIRST® Tech Challenge
Field Inspector Manual

## League Meet Venue (12 team event)

Competition area:

- Space for 1 field, scoring table, video projection, seating for spectators

- Reliable power for scoring table and video projection

- No WiFi communication interference (WiFi suppressors)

Pit area:

- Space for a 6' table per team, pit administration table, practice field

- Electricity for charging stations

- Proximity to competition area (typically same room), good queuing path

## League Meet Venue (12 team event)

Check-in and registration table

Robot Inspection station(s)

Volunteer room:

   Space to store personal belongings, food, tables

Parking

# League Meet Equipment (partial list)

Official field (perimeter, floor tiles, game elements, taped sections for drivers. batteries)

Practice field

Scorekeeping computer (with printer and results from previous League Meets)

Timekeeping computer (with display and sound for field)

Video projector for match results and team ranking displays

Tables and chairs
   Queuing, Scorekeeping

Robot sizing boxes

Alliance flags (8)

Particle counters for referees

Scoresheets, inspection sheets

P/A system for competition and pit area

Power strips for Pit Area charging stations

# League Meet Event Day (10-team event)

| Time | Activity |
|---|---|
| 6:00 am | • Event host, Referees and all other Volunteers arrive<br>• Provide breakfast (if applicable)<br>• Distribute name badges, etc<br>• Referees meet and receive briefing on their specific responsibilities<br>• Referees receive assignments and job specific tools<br>• Place signs to direct traffic outside and inside the Venue<br>• Setup Competition Field and Pit tables |
| 6:45 am | • Inspectors in place<br>• Teams and Volunteers setup the Pit Area and Competition Field |
| 7:00 am | • Registration begins, Pit opens (have a plan in place for addressing the inevitable early arrivals)<br>• Run Match schedule and distribute to Teams when all Teams have checked in.<br>• Robot Inspection begins |
| 7:45 am | • Driver's meeting with Head Referee<br>• Queue Teams for first matches. |
| 8:00 am | • Qualification Matches begin |
| 10:15 pm | • Begin breakdown of all areas<br>• Cleanup site and remove trash |

Should be *at least* 2h36m for
10-team  event, 12-min matchcycle

# Time needed for 5 qualification matches

| # of Teams | # of Matches | 1 Field 12-min cycle time | 2 Fields 7-min cycle time |
|:---:|:---:|:---:|:---:|
| 10 | 13 | 156 min (2h36) | * |
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| 15 | 19 | 228 min (3h48) | * |
| 16 | 20 | 240 min (4h00) | 140 min (2h20) |

* While it's possible to use 2 fields to get some improvement in match cycle time, it's not reasonable to expect 7-minute cycle times because there are so few matches per round.

## Important League Meet notes

At end of each League Meet, Scorekeeper must be sure to export results for use in next event

Each League event (except the first one) must start by importing results from previous event

*Never* delete a team from scoring system – mark as "not present" instead

Have robust backup plans available

League Budgeting

## League Budgeting / Financing

I don't have details about League Financing for 2016-2017

Last season event registration was handled via FIRST in Texas and EventBrite

   Introduces delays in funding availability

Emerald League Fees for 2015-2016 were $250/team

# League cost estimates

| Item | Typical Cost | Notes |
| --- | --- | --- |
| Playing Field (borders/floor) | $900 | Teams can often provide |
| Game Elements | $450 plus shipping | Teams can often provide |
| Scoring computer | | |
| Projection / display | | |
| Tables and chairs | | (provided by host?) |
| Lunch / catering | $300 | @ League Tournament |
| Practice field | | Teams can often provide |
| Safety glasses (for volunteers) | $100 | |
| Printing / signage | $150 | |
| Awards | $300 | UTA to provide? |
| Volunteer shirts | $300 | |

Many items are reusable from one league event to the next

# Questions and Discussion

# Advancement

Still no word on # of advancing teams

Still no word on availability of qualifiers for League teams

Pm's guesses on advancement
(assuming 36-team regional championship)

10 teams:  advance 3 (maybe 4) teams

12 teams:  advance 4 teams

16 teams:  advance 4 (maybe 5) teams

# Advancement criteria, 3 or 4 teams advance

| Award | 3 advancing teams | 4 advancing teams |
|---|---|---|
| 1. Inspire Award Winner | Advances | Advances |
| 2. Winning Alliance Captain | Advances | Advances |
| 3. Inspire Award 2nd place | Advances | Advances |
| 4. Winning Alliance 1st pick | Only if Captain is also Inspire 1st or Inspire 2nd | Advances |
| 5. Inspire Award 3rd place | Only if both winning alliance teams receive Inspire | Only if at least one Winning Alliance team receives Inspire |
| 6. ~~Winning Alliance 2nd pick~~ | N/A | N/A |
| 7. Think Award Winner | no | Only if *both* Winning Alliance teams receive Inspire |
| 8. Finalist Alliance Captain | no | Only if Think Award winner is on Winning Alliance *and* Inspire 2nd or 3rd |
| 9. Connect Award Winner | no | Only if Finalist Alliance Captain already advanced due to previous award |