

PIT DISPLAY

Table of Contents

Disclaimer3

 Disclaimer4

Configuration5

 About Pit Display.....6

Displays8

 Qualifications9

 Playoffs..... 11

Disclaimer

Disclaimer

WARNING

WARNING

Robot can be dangerous. By using the Field Management System (FMS) Software, you understand that in addition to the safety mechanisms built into the software, you, the operator, play a critical part in making sure that the environment around you is safe before enabling robots. You should only enable robots (use the "Match Start" button) when the robots are in a contained area and segregated from humans, who may be injured due to the robot's motion. If you disagree, or are not willing to use the software under these conditions, you should not proceed.

Configuration

About Pit Display

Introduction

Pit Display is a web based software program, built and distributed by *FIRST*, that is used to relay rankings and tournament information from FMS to the spectators in the Pit at the venue. Pit Display can be run on a computer containing an internet browser (like Firefox or Chrome) and an ethernet port or wireless adapter. This manual will walk through the available data, configuration options, and best practices related to the Pit Display.

Wiring Pit Display

In order to connect to FMS, the Pit Display must have a wired or wireless connection to FMS. If wired, it needs to be on the same network as the FMS machine (10.0.100.X), and no additional LANs. For wireless access, if field wireless is available, connect to the appropriate wireless network and ensure the target machine receives an address of 10.0.100.X. Wireless networks for *FIRST* fields have different names from truck to truck, contact the FTA for additional information.

Whenever possible, the Pit Display should be on a wired Ethernet connection.

Opening Pit Display

To open the Pit Display, simply use a web browser (such as Chrome or Firefox) and open a new page/tab. Navigate to **10.0.100.5/Pit** in your browser address bar, and the Pit display for the appropriate tournament level (Qual/Playoff) will open. If the display does not open, ensure your connection to FMS by using ping and (for Off-Season installations) making sure IIS is running on the FMS machine. (IIS will automatically be running on Official *FIRST* fields)

Event Setup Order

In order to properly synchronize with FMS, it is highly recommended that you do not run access the Pit Display program until after initial configuration of the event is complete through the Event Wizard and Practice matches are complete. Configuration information is downloaded by the program, and completing in this order should lead to the best experience.

Pit Display

Closing Pit Display

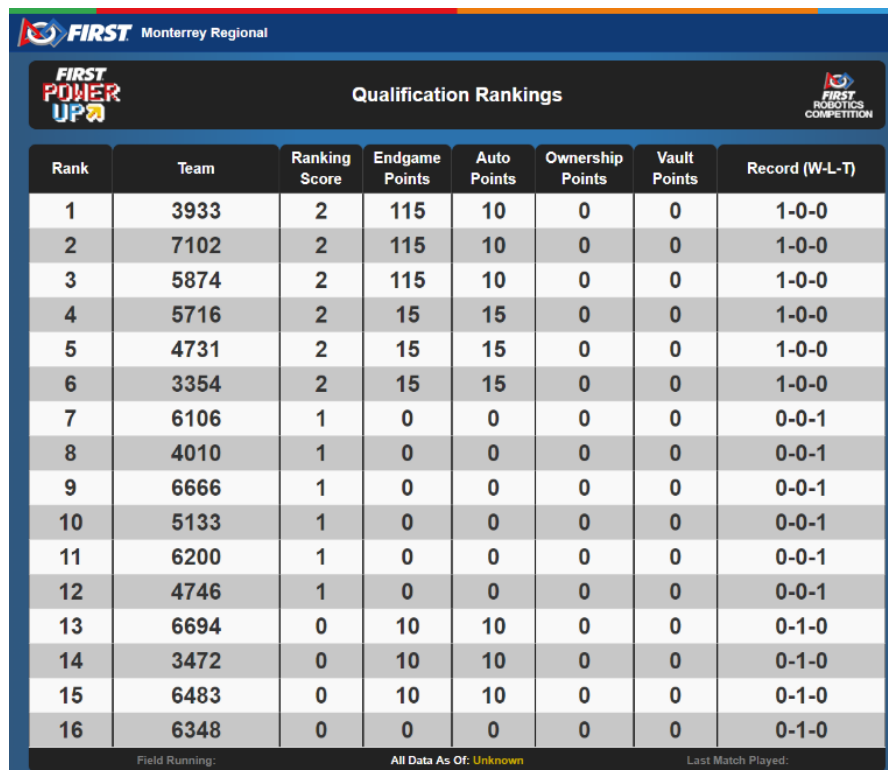
To close the software, simply close your web browser (or the Pit Display tab therein) or use the windows hotkey combination of ALT-F4.

Displays

Qualifications

Qualification Pit Display

Display



The image shows a digital pit display for the FIRST Monterrey Regional event. The display features a table titled "Qualification Rankings" with columns for Rank, Team, Ranking Score, Endgame Points, Auto Points, Ownership Points, Vault Points, and Record (W-L-T). The table lists 16 teams, with teams 1-6 having a Ranking Score of 2, teams 7-12 having a Ranking Score of 1, and teams 13-16 having a Ranking Score of 0. The display also includes logos for FIRST POWER UP and FIRST ROBOTICS COMPETITION. At the bottom, there are indicators for "Field Running:", "All Data As Of: Unknown", and "Last Match Played:".

Rank	Team	Ranking Score	Endgame Points	Auto Points	Ownership Points	Vault Points	Record (W-L-T)
1	3933	2	115	10	0	0	1-0-0
2	7102	2	115	10	0	0	1-0-0
3	5874	2	115	10	0	0	1-0-0
4	5716	2	15	15	0	0	1-0-0
5	4731	2	15	15	0	0	1-0-0
6	3354	2	15	15	0	0	1-0-0
7	6106	1	0	0	0	0	0-0-1
8	4010	1	0	0	0	0	0-0-1
9	6666	1	0	0	0	0	0-0-1
10	5133	1	0	0	0	0	0-0-1
11	6200	1	0	0	0	0	0-0-1
12	4746	1	0	0	0	0	0-0-1
13	6694	0	10	10	0	0	0-1-0
14	3472	0	10	10	0	0	0-1-0
15	6483	0	10	10	0	0	0-1-0
16	6348	0	0	0	0	0	0-1-0

Field Running: All Data As Of: Unknown Last Match Played:

The standard Qualification Pit Display looks similar to the internet event results pages, but specially adapted for use on site at events in progress.

Across the bottom of the display are indicators of the last match played on the field, the time difference between that Published schedule and the actual times that match was played, and the last time the data was updated. **Note:** The "all data as of" marker is based on the Pit machine's time, not the event server. Please make sure the Timezone is properly set on the Pit machine for timing to be accurate.

Pit Display

The remainder of the screen is dedicated to current rankings as of Last Match Played on the field, as indicated at the bottom of the screen.

Along with rank and team number, the following information is shown:

- Ranking Points - Cumulative earned Ranking Points
- Endgame Points - Cumulative earned Parking + Climbing Points
- Auto Points - Cumulative Sum of Alliance Autonomous points
- Ownership Points - Cumulative sum of Switch + Scale Ownership Points in Auto and Teleop
- Vault Points - Cumulative sum of Alliance points earned from Power Cubes in the Vault
- Record - Win/Loss/Tie record for the Team. Any match that a team plays as a Surrogate does not count towards the Record column.

The Pit Display web page auto scrolls through the ranking list.

The Display will automatically advance to Playoffs once the schedule is activated.

Playoffs

Playoff Pit Display

Display

Display

The Qualification and Playoff Pit Display look very similar, except that the detail of team-by-team ranking in Qualifications is replaced with a row-per-match type display.

Across the bottom of the display are indicators of the last match played on the field, and the last time the data was updated. **Note:** The "all data as of" marker is based on the Pit machine's time, not the event server. Please make sure the Timezone is properly set on the Pit machine for timing to be accurate.

In each row, the [AX] number indicates the Alliance number, followed by the dash separated team numbers on the Alliance. The opposite exists on the blue alliance side of the display. In the middle is the number of wins each alliance has, red on the left and blue on the right.

The Display automatically advances between sublevels (QF, SF, F)