

OVERVIEW AND KEY TERMINOLOGY

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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.

Getting Started

Getting Started With the Screen Steps Documentation

ScreenStepsLive is a new tool that FRC/WPI are using to create and present documentation. This document is a brief introduction to the ScreenStepsLive site and the documentation contained [here](#).

What's Here?

The documentation on the ScreenStepsLive site encompasses a number of reference materials for teams, such as robot wiring and programming best practices. This section of the site, however, focused more specifically on the Field Management System (FMS) operation and notes for volunteers who interface with the software from event to event. The examples below were taken from a different project, and show Robot programming sections of WPILib, these example articles do not themselves appear in this portion of the site.

Navigating the Site

Navigating the Site

The documentation is organized into a hierarchy with Sections at the very top, followed by Manuals, Chapters, then Lessons. At any time while you are browsing through the documentation, you can use the navigation at the top of the screen to go back to the Manual or to the home screen. You can also use the navigation on the left side of the screen when viewing a Manual or Chapter to jump to a different Manual. Each article also has a Prev and Next link at the top and bottom of the article to take you to the previous article or next article in the Manual.

Using the Search

Using the Search

Overview and Key Terminology

A search bar is located at the top of each page which you can use to search the site. After entering a search query you will be brought to the search results page. From this page you can refine your query by selecting whether to "match any" or "match all" terms in the search. You can also narrow your search to specific manuals by checking them in the left pane.

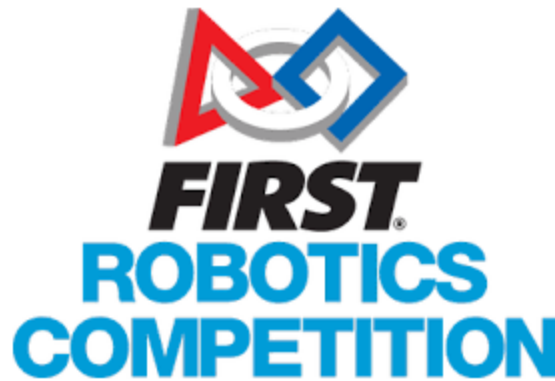
Downloading PDFs

Downloading PDFs

For offline viewing, every Manual in the documentation can be downloaded as a PDF. From the manual page or from any of the Lessons within the manual you can download the manual PDF by clicking the link on the left side of the window. Additionally, some individual Lesson PDFs can be downloaded from the lesson pages.

About FMS and Documentation Notes

Introduction



The Field Management System (FMS) is the electronics core of a *FIRST* Robotics Competition (FRC) playing field and encompasses both hardware and software components. The software package is used to control all the field electronics (LED Displays, Station Control Cabinets, E-stops, enable/disable of the Robots, network security, etc.) and is used to manage the event by creating match schedules, scoring the matches in real-time, and posting information to the Audience screen.

Official Game Manual

Information provided in this documentation is not intended to overrule or supersede the Official FRC Game Manual. While game specific information might be referenced in describing a particular feature or product, descriptions found here are not considered replacements for, or updates of, the necessity of reading the official information published on [this Game Manual page](#).

Overview and Key Terminology

Current Revision



While every effort is made to update the documentation to remain in step with all current features and season information, it's not always possible. As best as possible, the documentation is accurate for the current *FIRST Robotics Competition* game (based on the logo shown).

Documentation Accuracy

Due to the dynamic nature of this documentation, and the annual changes to the software necessary to facilitate each game, there may occasionally be inaccuracies between documented information and available features within the software itself. The documentation will reflect the most recent release of the software as best as possible, and unless otherwise noted, applies to the currently active FRC season. For example, a feature may be documented here, but not visible within the program when using a previous release.

Overview and Key Terminology

Terminology

A fair number of acronyms are used throughout this manual. Below is a list of many of these acronyms and additional terms along with their definition. *The official definitions and descriptions of field components are found in the FRC Game Manual.*

Acronym	Term	Definition
	<i>FIRST</i>	
FRC	Robotics Competition	The original <i>FIRST</i> program, for high school students.
FMS	Field Management System	The software (provided by <i>FIRST</i>) that walks volunteers through the course of an FRC event
SCC	Station Control Cabinet	A series of plastic enclosures that house electronics that are assembled and maintained by <i>FIRST</i> Engineering, and setup around the field
DS	Driver Station	A computer, usually a Windows laptop, used to relay control commands from the Team to the Robot
	roboRIO	Control system "brain" manufactured by National Instruments and required on each FRC Robot
	Pit Display	A laptop, provided by <i>FIRST</i> that displays ranking information at each event to people not in the immediate area of the field
PCK	Philips Color Kinetics	A line of products manufactured by Philips, including controllers and light strings, that commonly appear around FRC fields to relay scoring information to the audience and teams
	Audience Display	A software program that is used to control the display of game information to the audience, including real-time scoring, rankings, playoff brackets, and more.
FCUI	Field Control User Interface	Formerly a piece of <i>FIRST</i> hardware, now refers to the match control bar within the Match Play interface.