NXT Reference Books for FLL

by Dale Jordan
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In recent months there have been many new books published for the NXT. Formal reviews are given for most of these at the various book sellers such as amazon.com and Barnes & Noble. The reviews here are based on how these books may benefit FLL teams and coaches.

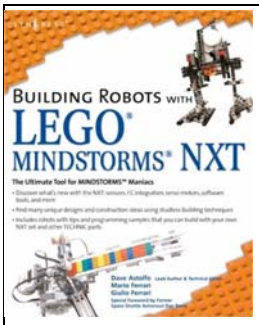
There are a few other NXT Books available. There is so much being written that it is difficult to keep up. Before purchasing, carefully read any reviews as some early books are rather lacking.

NXT-G software related books were not reviewed. The NXT-G online help, as well as the online tutorial by Dale Yocum provide reasonable software coverage, especially for beginning teams.

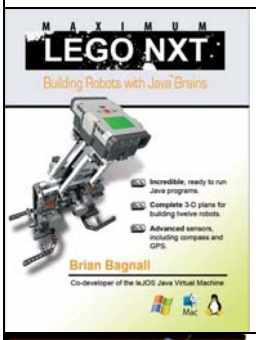
"Building LEGO Robots for FLL" by Dean Hystad. This is not a new book, but should be the starting point for any reference material for an FLL team, and hence deserves special mention here. It is a great beginning source for coaches and kids alike. It is free and is included in the ORTOP training CD. It provides an excellent introduction to basic building techniques. Its (V1.3) major drawback is that it has not been updated to address the NXT and studless building techniques.

"LEGO MINDSTORMS NXT Orange Book" by Yoshihito Isogawa. This book is written in Japanese, but is mainly a picture book with many interesting examples that are easily constructed to illustrate basic concepts. If you don't read Japanese, this should not be a hindrance to buying the book. The pictures are detailed enough so you should easily be able to discover what the model is supposed to do.

Most of the examples are self-contained models that do something. For example, diagrams showing gearing are constructed right on a motor so that it can easily be demonstrated. Basic sensor use is well covered as well as gears and motors. Some other concept models include converting circular to linear motion, steering, suspension, walkers, vibration and a transmission. The Orange Book is just one book in a series. It has received the best reviews of the books in the series. It can be purchased through www.yesasia.com.

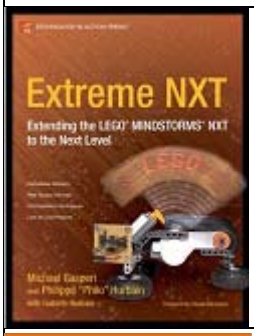


"Building Robots with LEGO MINDSTORMS NXT, The Ultimate Tool for MINDSTORMS Maniacs" by Dave Astolfo, Mario Ferrari, et al. These are the same authors that wrote the predecessor for the RCX, "Building Robots with Lego Mindstorms, The Ultimate Tool for Mindstorms Maniacs". This book follows the same style as its predecessor, but using studless examples. For beginners, there is a chapter on building strategies which should be useful for getting some basic concepts down and some considerations on modular design. The rest of the book is really aimed at more advanced builders. There are many good examples and pointers to other reference information.

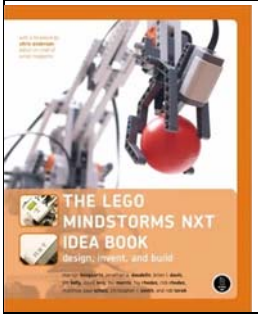


"Maximum LEGO NXT, Building Robots with Java Brains", by Brian Bagnall. There are several interesting robot designs throughout the book and a short chapter on Building 101 that could be useful to an FLLer. This book is better positioned for those programmers that are ready to go beyond FLL

"LEGO MINDSTORMS NXT, The Mayan Adventure", by James Floyd Kelly. This book would make for a project book for FLLers to work on during the off-season. It has a number of good example robots that building ideas could be gleaned from. It also covers some basic programming examples to get the robots to work. It does not directly cover many of the basic concepts of gears, pulleys, etc. that other books do. As a standalone reference it is a bit lacking, but combines well with other reference books. Younger FLL teams would probably find more interest in this book than older members.



"Extreme NXT, Extending the LEGO MINDSTORMS NXT to the Next Level", Michael Gasperi and Philippe Hurbain. This book covers the details of the sensor internals and techniques for building your own sensors. Coaches and Mentors that are engineers or serious LEGO fanatics would thoroughly enjoy reading this book and perhaps implementing some of the projects. However, it starts out way beyond the level of most FLLers.



"The Lego Mindstorms NXT Idea Book: Design, Invent, and Build" by Martijn Boogarts, et al. This book is due out at the end of September. It appears to hold promise for FLL teams.