

1. NXT-G FTC Workshop 2008

i) Getting Started 30-45 min

(a) http://www.zdome.net/wiki/index.php/FTC_Briefing

ii) Using NXT-G

(a) Installing the Software

(b) Quick tour

1. Sequence Beam

i. Start Point

ii. Simultaneous tasks

2. Palettes

i. Common

ii. Complete

iii. New Blocks

iv. FTC Motor Controller

v. FTC Servo Controller

vi. Sensors

vii. FTC Data Blocks

viii. Drive Motors

ix. Read buttons

x. Read packet

xi. Read Controller

xii. Scale motor Value

xiii. Scale servo value

xiv. Custom

xv. Subroutines (my blocks)

3. Configuration Panel

4. Controller

i. NXT Window

ii. Connection

iii. Name

iv. Memory

5. Help & Navigation

6. Menu Bar

i. Tools

ii. Calibrating sensors

iii. Light & Sound

7. Tool Bar

i. Pointer

ii. Pan

iii. Comment

8. Robot Educator

(c) Changing Firmware

1. Tools>update NXT Firmware

i. LEGO Mindstorms NXT Firmware v1.21

2. Troubleshooting

i. Reset button

ii. Device Manager

iii. Battery level

iv. USB connection

(d) Connecting with Bluetooth

1. ABE 22s USB Bluetooth adapter

i. Must use ABE driver, not plug & play

(e) Writing a Simple Program

1. Compass sensor

(f) Importing Blocks ???

1. Tools>Block Import & Export Wizard

iii) Using Logitech Controller

(a) FTC Controller Station

1. C:\Program Files\LEGO Software\LEGO MINDSTORMS Edu NXT\examples\FTC Toolkit\FTC Controller Station

2. *Run Program*

3. *Enter NXT Name*

4. *Connect*

5. *On NXT, Run Program chooser*

6. *Select Dual*

7. *Select program robot should use in teleop mode*

8. *Click update in FTC controller station*

9. *Change mode to teleoperated*

10. Autonomous vs Teleoperated

i. Enabled Disabled status

ii. Does not work unless programmed to do so

(b) Sample Controller Programs

iv) Resources

- (a) www.ftctraining.com
- (b) [ORTOP's FTC page \(includes local event schedule\)](#)
- (c) [FIRST's FTC Community page \(including registration\)](#)
- (d) [FIRST's FTC FAQ page](#)
- (e) [FIRST's FTC Communication page](#)
- (f) [PITSCO's Tetrix parts page](#)
- (g) <http://firsttechchallenge.blogspot.com/>
- (h) http://www.usfirst.org/uploadedFiles/Community/FTC/FTC_Documents_and_Updates/2008/FTC%20Competition%20Kit%20for%20FIRST.pdf
- (i) http://www.mindsensors.com/index.php?module=pagemaster&PAGE_user_op=view_page&PAGE_id=58
- (j) http://www.ortop.org/NXT_Tutorial/
- (k) <http://hitechnic.com/>
- (l) [http://mindstorms.lego.com/Support/Updates/.](http://mindstorms.lego.com/Support/Updates/)
- (m) http://www.education.rec.ri.cmu.edu/content/events/ftc/nxt_g/index.htm