

Phone And Robot Configuration Guide

Initial Phone Setup - All Phones

Developer Configuration

1. From Android Settings, go to About phone
2. Tap SW Version 7 times
3. Return to Settings

Connect to PC

1. From Android Settings, go to Connect to PC
2. Select Install driver
3. Select Enable USB debugging
4. Select Don't ask me again
5. Deselect Media device (MTP)
6. Return to Settings

Airplane mode

1. From Android Settings, set Airplane mode to "ON"

Wi-Fi

1. From Android Settings, set Wi-Fi to "On"
2. Select Wi-Fi
3. From "..." (lower right corner) select Wi-Fi Direct
4. Select "RENAME DEVICE" (bottom center) and set to:
 - a. "13778-RC" (Lions Robot Control phone)
 - b. "13778-DS" (Lions Driver Station phone)
 - c. "7582-RC" (Eagles Robot Control phone)
 - d. "7582-DS" (Eagles Driver Station phone)

Display

1. From Android Settings, select Display
2. Select Sleep
3. Select a reasonable time after which to sleep (e.g., 30 minutes)
4. Longer times are more convenient, but have shorter battery life

FTC Driver Station Software Download

Sign-In To A Google Account

1. From Android Settings, select Wi-Fi
2. Select a wi-fi network
3. Type the password and select Connect
4. From settings, select Add account
5. Select Google
6. Create or sign-in to a Google account
7. From Settings, select Google again
8. Select the account you just signed into
9. Deselect Sync for every application type

FTC Driver Station Download

1. Go to Play Store
2. Search for FTC Driver Station
3. Accept and install the app

Remove Google Account

1. From Android Settings, select Google
2. Select the Google account
3. From "..." select Remove account
4. Select Remove account

Robot Configuration

Set Hub Address

Hubs require unique addresses, but all hubs come from the factory with an address of 2. As a result, the auxiliary hub must have its address changed to the value 3. These instructions come from <http://www.revrobotics.com/content/docs/REV-31-1153-GS.pdf>, page 13 (PDF page 15).

1. Plug the Robot Controller phone directly into the auxiliary hub
2. From the Driver Station, select "..." (upper right)
3. Select Settings
4. Select Advanced Settings
5. Select Expansion Hub Address Change
6. Use the drop-down menu to select the address 3
7. Return to the home screen

Disable Spell Checking

1. From Android Settings, select Language & input
2. Deselect Spell checker

Setup Robot Configuration

1. From FTC Robot Controller or FTC Driver Station, select "..." (upper right)
2. Select Configure Robot
3. Edit Lion/Eagle Main (or select New)

Competition Setup

Wi-Fi - Driver Station Phone

1. From Settings set Wi-Fi to "On" (should be ON already, though)
2. From "..." (lower right corner) select Wi-Fi Direct

Wi-Fi - Robot Control Phone

1. From Settings, set Wi-Fi to "On" (should be ON already, though)
2. Select Wi-Fi
3. From "..." (lower right corner) select Wi-Fi Direct
4. Select SEARCH FOR DEVICES (bottom center)
5. Select phone to be paired
 - a. 13778-DS (Lions)
 - b. 7582-DS (Eagles)
6. From "Wi-Fi Direct" select Connect
7. From paired phone "Invitation to connect" select Accept
8. Exit from Settings on both (RC and DS) phones

Driver Station Name - FTC Driver Station

1. From FTC Driver Station, select "..." (upper right)
2. Select Settings
3. Select Driver Station Name
4. Enter the driver station name
 - a. 13778-DS (Lions)
 - b. 7582-DS (Eagles)
5. Select OK

Robot Controller Name - FTC Robot Controller

1. From FTC Robot Controller, select "..." (upper right)
2. Select Settings
3. Select Robot Controller Name
4. Enter the robot controller name
 - a. 13778-RC (Lions)
 - b. 7582-RC (Eagles)
5. Select OK
6. Return to FTC Robot Controller home panel

Pair With Robot Controller - FTC Driver Station

1. From FTC Driver Station, select "... " (upper right)
2. Select Pair with Robot Controller
3. Set Filter wifi devices to "ON"
4. Select the robot controller to be paired with
 - a. 13778-RC (Lions)
 - b. 7582-RC (Eagles)
5. Return to FTC Driver Station home panel

Check Network Connection - FTC Driver Station

1. From FTC Driver Station, check the Driver Station name (top left)
 - a. 13778-DS (Lions)
 - b. 7582-DS (Eagles)
2. Check the network connection (top center)
 - a. 13778-RC (Lions)
 - b. 7582-RC (Eagles)
3. Check the ping latency (top right)
 - a. Ping latency will vary substantially
 - b. Ping latency should be in the range of about 1 ms to 30 ms
 - c. It's OK if higher latencies occasionally occur

If Driver Station Cannot Connect With Robot Controller

Failure to connect may occur for many reasons, e.g., one Robot Controller phone is switched out for another, or because of low battery charge, programming, hardware, or other failure.

1. Reboot both the Driver Station and the Robot Controller phones
2. Restart the procedure from the beginning