**Troubleshooting the 6541 Robot**

**Problem:**

1. **Robot is not detecting REV Hub.**
2. Set the robot configuration. To do so, **ON THE ROBOT CONTROLLER PHONE**, tap the three white dots in the **UPPER-RIGHT CORNER**. Tap **“Configure Robot”.** When presented with the menu, scroll down until you see the configuration labelled **“Ftc6541\_2020”**. Tap the corresponding “Activate” button directly **BELOW** the label “Ftc6541\_2020.”
3. Check if robot detects the base. **If not, continue to step 3.**
4. Unplug the USB cable from the **ROBOT CONTROLLER PHONE**. On the **ROBOT CONTROLLER PHONE**, tap the **WHITE SQUARE** in the **LOWER RIGHT CORNER** of the phone screen. **SWIPE RIGHT** on the tab labelled **“FTC Robot Controller”** to kill the application. Reopen the app labelled “FTC Robot Controller” on the phone. Turn **OFF** the **ROBOT POWER SWITCH**. **WAIT 10 SECONDS** and turn **THE ROBOT POWER SWITCH** back **ON**. Finally, plug the USB cable back into the phone.
5. **Driver Station is not communicating with Robot Controller phone.**
6. On the **DRIVER STATION PHONE**, tap the three white dots in the **UPPER-RIGHT CORNER.** Tap **“Settings”**. When presented with the menu, tap the **FIRST OPTION**, labelled **“Pair with Robot Controller”.** In the **WiFi Devices** section, tap the option corresponding to the **NAME OF THE ROBOT CONTROLLER PHONE, visible in the UPPER LEFT SECTION** of the robot controller phone. Press the **WHITE SQUARE** in the **LOWER LEFT CORNER** of the phone screen **TWICE**.
7. Check if Driver Station connects to Robot Controller phone successfully. **If not, continue to step 3.**
8. On the **DRIVER STATION PHONE**, hold down the **TRIPLE SET OF LINES** on the **LOWER-RIGHT CORNER** of the phone screen. **SWIPE RIGHT** on the tab labelled **“FTC Driver Station”** to kill the application. Reopen the app labelled “FTC Robot Controller” on the phone.
9. **Driver Station is not detecting game controllers.**
10. Make sure connection between **USB Hub** and **game controllers** is tight.
11. Make sure connection between **USB Hub** and **phone** is tight.
12. On the **DRIVER** controller, while **HOLDING DOWN** the **START** button, press the green **A** button. If the **LEFT** controller icon on the upper right corner of the phone flashes, then the **DRIVER** controller is connected successfully.
13. On the **OPERATOR** controller, while **HOLDING DOWN** the **START** button, press the red **B** button. If the **RIGHT** controller icon on the upper right corner of the phone flashes, then the **OPERATOR** controller is connected successfully.
14. If all previous steps fail, replace the **USB Hub** and **USB OTG cable.**
15. **Robot subsystems or drivebase acts lethargically.**
16. On the **DRIVER STATION** phone, check the battery voltage. If the battery voltage is **LESS THAN 12 VOLTS, REPLACE THE BATTERY.**
17. Make sure all wiring connections on robot on reliable.

**6541 Robot KEYMAPS**

**Driver Controller**

Left Trigger – Rotate anticlockwise while held

Right Trigger – Rotate clockwise while held

Left Bumper – Reduce power of all robot drivebase motion while held

Right Bumper – Invert drive controls.

Left Joystick X – Crab left and right, power based on tilt angle

Right Joystick Y – Drive forwards and backwards, power based on tilt angle

**Operator Controller**

Back – Zero-calibrate elevator.

A – Grab stone with grabber

B – Release stone with grabber

X – Close foundation latch

Y – Open foundation latch

Left Joystick X – Turn wrist CW/CCW, up to 90 degrees.

Right Joystick Y – Raise/lower elevator

D-Pad Up – Increase elevator preset level by 1

D-Pad Down – Decrease elevator preset level by 1

D-Pad Left – Set elevator to base level

D-Pad Right – Set elevator to level 2

**6541 Robot Pre-Drive TO-DOS:**

* **REPLACE BATTERY WITH FRESH BATTERY FROM CHARGER**
* **POWER CYCLE ROBOT CONTROLLER PHONE AND REV HUB**
* **ENSURE ELEVATOR LOWER LIMIT SWITCH IS DEPRESSED AND THERE IS NO SLACK IN THE ELEVATOR ROPE**
* **ENSURE ALL WIRING CONNECTIONS ARE STABLE AND SUBSYSTEMS ARE TIGHTLY ATTACHED**