

Code Review Post St. Joe

12.03.2019

Overall Structure

Inspection by Sequence

- Greg Hatch
- Greg ball
- Coconut ball pickup
- Deliver Sequence

St. Joe Fixes

- Band-aids or legitimate fixes?

Practice 1

Problem	Cause	Response	Outcome
Azimuths 90 deg off	Axle loose	Tighten	Successful
Nothing happens in sandstorm	Waiting for pressure	Raise elevator to get seal, add pressure timeout	Unsuccessful, need more

Practice 2

Problem	Cause	Response	Outcome
No suction on teleop transition	Solenoids not opening	Set solenoids in TeleopInit()	Successful
No suction during climb	Trident solenoid open	Close trident solenoid in climb sequence	Successful
No suction during stow	Pressure goodEnough too low, doesn't think we have game piece (onTarget)	Increase good enough	Successful
Not moving in Sandstorm	Waiting for pressure onTarget with hatch	Raise elevator more	Successful
Can't move elevator at certain positions	Safety subsystem limits are different	Adjust safety limits	Mostly successful, didn't change limit in of() method

Practice 3

Problem	Cause	Response	Outcome
Difficult picking up hatches	Elevator low setpoint too low	Raise all elevator positions by 1 in.	Unsuccessful
No log	Unknown	None	N/A

Practice 4

Problem	Cause	Response	Outcome
Biscuit hits shoulder gear	Elevator low setpoint too low	Raise elevator position	Successful
No log	Unknown	None	N/A

Match 1

Problem	Cause	Response	Outcome
Cross hairs difficult to see	none	Change camera cross hairs to dark green	Successful
Driver controller behaves weird	Unknown	Set deadband to 0.09	Unknown, may not have been root cause
No log	Permissions wrong	Set permissions to lvuser	Successful

Match 2

- Climber set higher to protect from accidental release during Hab lvl 2 drop

Problem	Cause	Response	Outcome
Elevator won't move	Pulley rope caught in elevator roller guides	Tie end down	Successful

Match 3

- CommandGroup sequences are now enclosed by "BEGIN FOO" and "END FOO"

Problem	Cause	Response	Outcome
Elevator positions not right	Unknown	Adjust elevator heights	Successful
Elevator behavior	PositionExecute waiting for Biscuit	Change order of PositionExecute (Elevator - > Biscuit)	Successful

Match 4

- Climb to 80%
- Suction lower to 20%
- Gremlin hunt

Match 5

None

Match 6

Problem	Cause	Response	Outcome
Last ball stuck in intake	N/A	None	N/A
Can't build climb seal	Suction cup lower too fast	Set to 0.15	Successful

Match 7

Problem	Cause	Response	Outcome
Missed ball pickup	Valve not opening fast enough	Open valve at beginning of coconut pickup	Successful
Biscuit stabs robot after Player hatch	Elevator too low, moving biscuit before elevator	Set Biscuit to safe up position if Player hatch	Successful

Match 8

Problem	Cause	Response	Outcome
Yellow card	Too tall during climb	Lower stow position	Unsuccessful

Match 9

Problem	Cause	Response	Outcome
Biscuit always going up	Wrong bounds for conditional command	Get action from VISION instead to decide if go to safe position	Successful

Match 10

Problem	Cause	Response	Outcome
Yellow card	Too tall during climb	Open loop jog into ball to clear height restriction	Successful

Match 11

None

Elims 1

None

Elims 2

None

Things to be fixed

To Do

- Hatch pickup with vision
- Hatch place level 2 & 3 with vision
- Game controller: move not stage
- Auton for Sandstorm