```
// State Machine for auto-stack
switch (stackStep) {
   // High Stacking
    case HIGH STACK START:
        // Only start once we release the button
        if (!controller.get digital(BTN ARM HIGH)) {
            stackStep++;
        break:
    case HIGH STACK START + 1:
        // Move the arm up to position
        armSeek = ARM POS HIGH;
        // Hold the wrist up
        wristSeek = WRIST VERTICAL POS;
        // Wait until arm is above threshold before continuing
        if (armPos > ARM_POS_HIGH - 50) {
            stackStep++;
       break;
    case HIGH STACK START + 2:
        // Move wrist to stack cap
        wristSeek = WRIST BACKWARD DROP POS;
        // Wait until wrist in position
        // De-rotate wristpos by armpos to get angle relative to floor
        if (wristPos < WRIST BACKWARD DROP POS + 15 + ( armPos * 3 / 5
        )) {
            stackStep++;
           // Record time this step finished
           timeLastStep = millis();
       break;
    case HIGH STACK START + 3:
        // Wait for 0.25 seconds before continuing
        if (timeLastStep + 250 < millis()) {</pre>
            stackStep++;
        break;
    case HIGH STACK START + 4:
       // Now move arm down
        armSeek = 1;
       // Once it's almost down continue
        if (armPos < ARM POS HIGH / 2) {
            stackStep++;
        break;
```

```
case HIGH_STACK_START + 5:
   // Now we are done, clear flags
   armSeek = -1;
   // Hold wrist up though
   wristSeek = WRIST VERTICAL POS;
    stackStep = -1;
   break;
// High De-Score
case KNOCK HIGH START:
   // Start moving arm up
   armSeek = ARM POS HIGH;
   // Move wrist all the way back
   wristSeek = WRIST BACKWARD DROP POS - 100;
   // Wait until arm is up before continuing
   if (armPos > ARM_POS_HIGH) {
        stackStep++;
   }
   break;
case KNOCK HIGH START + 1:
   // Now move the wrist forwards to knock cap off
   wristSeek = WRIST_VERTICAL_POS;
   // Wait until wrist is in position
   // Continue last steps of high stack
   if (wristPos > WRIST_VERTICAL_POS - 20) {
       stackStep = HIGH_STACK_START + 3;
       timeLastStep = millis();
   break;
// Low Stacking
case LOW STACK START:
   // Wait until button released
   if (!controller.get_digital(BTN_ARM_LOW)) {
       stackStep++;
   break;
case LOW STACK START + 1:
   // Move arm up to correct position
   armSeek = ARM_POS_LOW;
   // Hold wrist upright
   wristSeek = WRIST VERTICAL POS;
   if (armPos > ARM_POS_LOW - 50) {
       stackStep++;
   break;
```