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| --- | --- | --- | --- | --- |
| Test Case | Expected Outcome | Actual Outcome | Result | Action taken |
| 1. | 1 x Heelflip  4 x Manual  2 x Kickflip  2 x Pop Shuv-It | 2 x Heelflip  5 x Manual  2 x Kickflip  2 x Pop Shuv-It | Fail | Wrong data – whoops! |
| 2. | 3 x Heelflip  2 x Manual  1 x Kickflip  4 x Pop Shuv-It | 3 x Heelflip  3 x Kickflip  3 x Manual  4 x Pop Shuv-It | Fail |  |
| 3. | 1 x Kickflip | 1 x Kickflip | Pass |  |
| 4. | 1 x Kickflip  1 x Manual | 1 x Kickflip  1 x Manual | Pass |  |
| 5. | 2 x Kickflip  1 x Manual  1 x Heelflip | 2 x Kickflip  1 x Manual  1 x Heelflip | Pass |  |
| 6. | 2 x Kickflip  1 x Manual  1 x Heelflip  1 x Pop Shuv-It | 2 x Kickflip  1 x Manual  1 x Heelflip  1 x Pop Shuv-It | Pass |  |
| 7. | 2 x Kickflip  1 x Manual  3 x Heelflip  2 x Pop Shuv-It | 3 x Kickflip  1 x Manual  3 x Heelflip  2 x Pop Shuv-It | Fail | See 8. |
| 8. | 3 x Kickflip  1 x Heelflip | 3 x Kickflip  3 x Heelflip | Fail | Added condition to check roll and pitch for kick and heelflips. |
| 9. | 3 x Kickflip  1 x Heelflip | 3 x Kickflip  3 x Heelflip | Fail |  |
| 10. | 4 x Manual  3 x Pop Shuv-It | 4 x Manual  3 x Pop Shuv-It | Pass |  |
| 11. | 7 x Manual  3 x Pop Shuv-It | 7 x Manual  3 x Pop Shuv-It | Pass |  |
| 12. | 7 x Manual  3 x Pop Shuv-It  1 x Heelflip | 7 x Manual  3 x Pop Shuv-It  1 x Heelflip | Pass |  |
| 13. | 2 x Heelflip | 2 x Heelflip | Pass |  |
| 14. | 3 x Heelflip  1 x Kickflip | 3 x Heelflip  1 x Kickflip | Pass |  |
| 15. | 3 x Heelflip  2 x Kickflip | 3 x Heelflip  3 x Kickflip | Fail | When kickflip happens before heelflip then kickflip count ends up being wrong. |
| 16. | 3 x Heelflip  1 x Kickflip | 3 x Heelflip  2 x Kickflip | Fail | When kickflip happens before heelflip then kickflip count ends up being wrong. |
| 17. | 4 x Heelflip | 4 x Heelflip  1 x Kickflip | Fail | When over 4 of heelflips the result is incorrect. |
| 18. | 3 x Heelflip | 3 x Heelflip | Pass |  |

End of Cases Comments:

I am happy with the process of detecting both the Manual and Pop Shuv-It Tricks, Pop Shuv-It was always going to be easiest to detect as it is one of the only tricks that a significant change in heading is an indication of when the trick has been performed.

I have now changed the method for identifying both kickflips and heelflips to follow this procedure:

1. Check for when first phase bounds are satisfied (Low Roll & high pitch)
2. If this is satisfied 7 times in a row, then this will change phase 1 to true.
3. If phase 1 is set as true, a variable count will be incremented for every reading after it has been set too true. If the count goes above 40 every is reset as if a kickflip of heelflip had been performed, then it should have go into phase 2 by now.
4. If phase 1 is set to true and the conditions for phase 2 are met by a reading (High Roll & low pitch) and then satisfied 7 times phase 1 is set back to false and phase 2 is set to true if this also happened within 40 readings.
5. Having got the point where phase 2 has now been set to true we can be happy that a kickflip or heelflip has been performed and increment the count for the relevant trick.

On to second phase of testing.