

# Data Collection

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Best Practices.



# Understanding unit lights.





### Blue solid

Ready to use



### Blue pulsing

unit is plugged in and charging



### Blue/red flickering

unit needs to be charged



Remember to close the lid of the charging port when not in use (charging)

### Purple slow flash

unit is ready to update and loading the information



### Purple fast flash

unit is updating



### Green

unit is certified in a workshop and ready to replace motor



### Yellow

unit is certified in a workshop and has motor, it has not yet used for the app



### Red

a sensor has failed otherwise unit



# Unit placement

*Check at the start of practice, and the midpoint if learning style assessment changes*



# Rotation

## Left and right

**Good**

0° - 30 degrees



Data collection



Data Accuracy



**OK**

30° - 60 degrees



Data collection



A few missing or unaligned tags

Data Accuracy



Some small errors but nothing serious

**Bad**

60° - 90 degrees



Data collection



Several missing or unaligned tags

Data Accuracy



Some types of data missing or some tags not aligned with data

**Worst**

More than 90 degrees



Data collection



Many missing or unaligned tags

Data Accuracy



Significant data errors, duplicate entries, or data missing with some tags misaligned with data

# Position



## Too High

Expected errors: blur

- Excess neck and mixing legs (especially backstretching)
- Longer than expected time



## Tilted back

Expected errors: blur

- Excess backstretching legs at rest
- Mixing feet, fly or breast legs
- Shorter than expected time



## Off Center

Expected errors: blur

- Inconstant stroke speed
- Stroke Count, CPU
- Stroke flow errors



## Backward

Expected errors: blur

- Free-hand movement
- Interactions allowed

# Long Hair Interference

It's important long hair be placed in a shallow bun on top of the head, not on the back of the head.

Otherwise the hair may:

- Heavy loose hair can shift the unit around
- Tall buns on the back of the head create a pedestal allowing the unit to shift
- Low buns cause the unit to tilt too far back



Most common symptoms: sudden change in results, accuracy will worsen

# Swimming

Be intentional in all movement



# Starting data collection

On 2 laps of normal swimming (50 or 100 ft) from a push-off the surface, swimming has started (stroke, kick, etc.) will not count swimming until the swimmer is at least 2 laps in a row of normal swimming.



## Starts

- **Blocks** ... climb up, stand up straight for 2 seconds, then lean over and do start
- **Push-off** ... do not lean forward before going underwater to push-off



## Turns

- **Flip** ... do not take 2 breaths (both sides) on last 2 strokes before initiating turn
- **Spins** ... get around off the wall quickly
- Don't put your head up to look at wall coming into turn
- Stay consistent with flip turns on free or back



## End swim

- Head into wall
- Upright right away
- Don't look ahead at the wall or up/down for the pool clock when coming in to end a lap
- If ending with flip turn, get head vertical and stay upright couple seconds

# What will impact data collection

Outlier data is automatically removed during analysis, so inaccurate data collection will not impact your scores.



## Why are there extra logs?

The following will create 2 logs instead of one, both will have last 1000 and 1000 entries, as the log is shorter than the size that it was

- Mid-pool to mid-pool new skills
- Posing to break mid-log (though, watch up to swimmer ahead etc.)

Multiple logs for every swimmer - this may create as much as 20 logs per swimmer

## Why times are wrong (fast or slow):



Lifting head into the wall (fast)

Loose finish (slow)

No power between sticking onto blocks and putting head down to the floor (slow)

Fast or pronounced forward motion before the push-off start (slow)





## Why does my data seem off?

### Mid-ride stroke changes

- Mixed stroke type on a lap, mis-classified stroke type

### Round/Pyroclones

- Some styles of freestyle may capture as the opposite, as the movements are very similar
- Mixed up freestyle may record as both or not at all - the algorithm expects a streamlined gliding motion
- One arm fly will usually record as freestyle
- Side breathing may register freestyle

### Freestyle/breathstroke catches

- No breath freestyle laps may be missed entirely, if the stroke is very smooth (only little side ways movement at the splashdown)
- If there is recording as both, check seat placement
- If freestyle is recording as both, check seat placement



## Why is my lapid out wrong?

### Mixing up laps

- No freestyle stroke test (underwater swimming)
- Less than 4 (fly/breast) or 4 (free/back) strokes per lap, could not confidently determine what stroke was being used, so assumed none and disallowed

### Laps split into shorter distances/bats split into odd laps

- Mixed pace time

### Laps split into shorter distances/bats split into odd laps

- Dropped odd laps for something or caught

### Laps split into shorter distances/bats split into odd laps

- Laps of same distance separated by a same distance gap (i.e. 1000 free downwind, 1000 free away, 1000 free downwind) 1000 free
- 1000 or 500, 1000 or 1000 away instead of a 1000 or split the sets



Redefining Athletic Limits