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Ball flight parameters

Ball speed

Launch speed of the golf ball. Ball speed has the biggest effect on carry distance. Centeredness of impact and an increase in club speed will ensure a higher ball speed.

Vertical launch angle

Angle at which the golf ball is launched relative to the horizon of the radar. Launch angle will influence the shot height and is mostly determined by the dynamic loft and angle of attack.

Horizontal launch angle

Direction in which the golf ball gets launched relative to the radar's target line. Club face angle will have the biggest effect on the horizontal launch angle of the ball.

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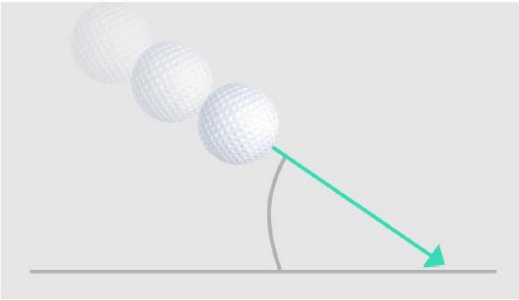

Vertical descent angle

Angle at which the ball approaches the landing area. A lower descent angle will increase distance with a driver, and a steeper descent angle will give a player more stopping power on the green with an iron.

Smash factor

The energy transfer ratio from club to ball as a result of impact position on the club face. Centered impact will improve smash factor for optimal ball speeds.

Spin rate

Number of rotations per minute of the ball at launch. A higher spin loft and higher friction will increase the spin rate of the ball.

Spin axis

Amount of axis tilt on the ball to determine the amount of curvature in the ball flight. A function of the delta between club face angle and club path.

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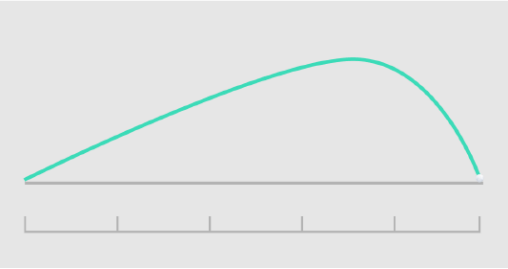
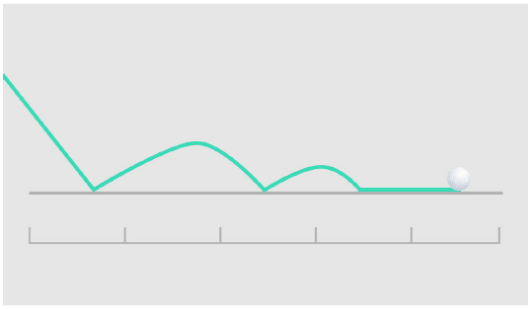


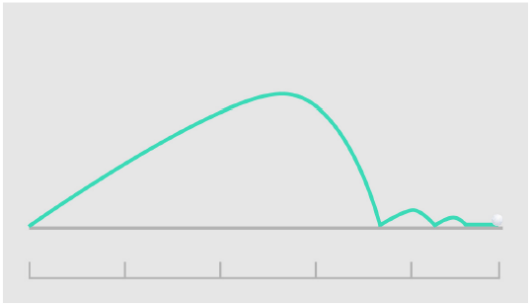
Carry distance

Landing distance of the ball from the tee. Ball speed, spin rate, and vertical launch angle are all factors that will determine the carry distance.



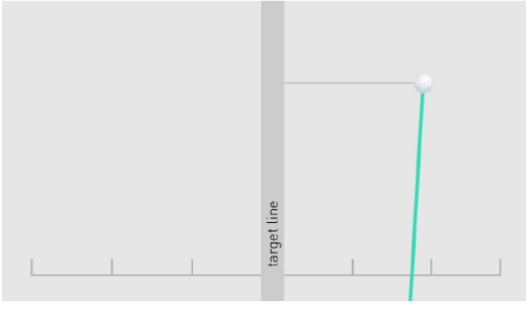
Roll distance

Amount of roll from carry distance to final position of the ball. Lower spin rate and lower launch angle will increase the amount of roll on the surface.



Total distance

Final position of the ball on the ground from the tee.



Lateral landing

Distance of the ball's impact point measured perpendicular to the target line.

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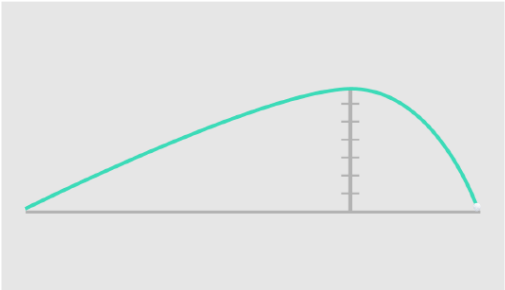
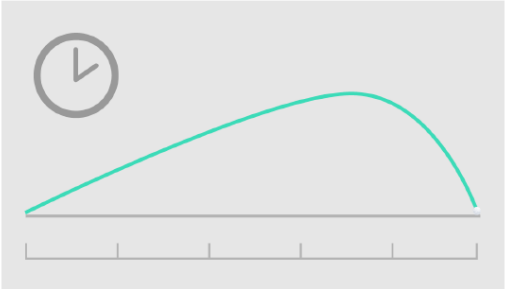


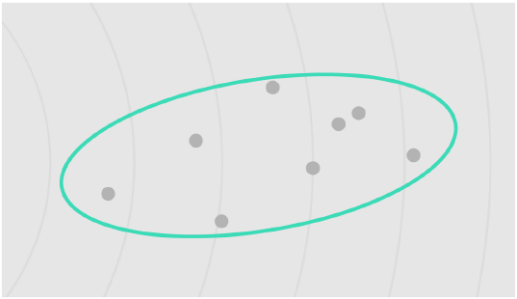
Apex height

Maximum height of the ball trajectory.



Flight time

Amount of time the ball spends in the air from time of club impact to initial ground impact, measured in seconds.



Shot dispersion

Grouping of the landing positions of shots with the selected club showing forward and lateral deviation of that cluster of shots.

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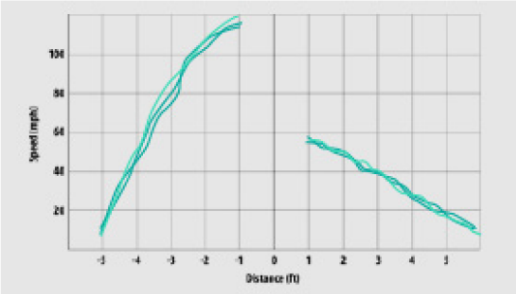
Club and swing parameters

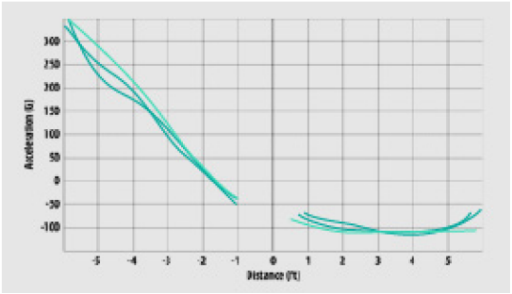
Club speed

Club head speed measured on the sweet spot at impact with the ball. Club speed has a direct influence on the ball speed, if struck on the club face center.



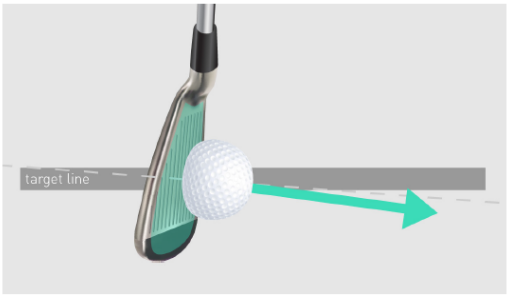
Club speed profile

Speed of the club head's sweet spot away from the radar, measured pre and post impact with the ball. From the speed profile, a player can determine swing speed consistency, energy transfer efficiency, and proper club extension post impact.



Club acceleration profile

Acceleration of the club head's sweet spot away from the radar, measured pre and post impact with the ball. The acceleration profile will indicate the rate of closure of the club head due to shaft bend and club release by the golfer.



Face angle

Club face angle relative to the radar's target line, calculated at the moment of separation with the ball. Face angle will influence the direction in which the ball starts relative to the radar's target line.

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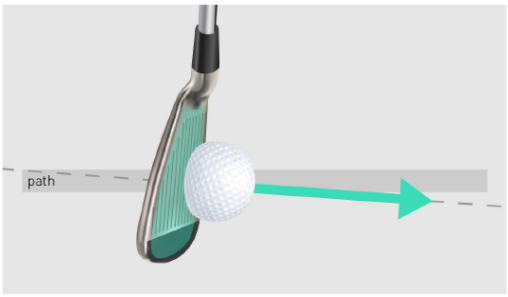

Face to path

Club face angle relative to the club path, calculated at the moment of separation with the ball. Face to path will tilt the spin axis if impact occurs on the club face center.

Dynamic loft

Loft of the club at separation with the ball. Dynamic loft influences the launch of the ball, and is a result of the static loft of the club, shaft bend at impact, angle of attack into the ball, and the amount of forward press a player has at impact.

Angle of attack

The angle at which the club head's sweet spot approaches the ball, measured at impact with the ball and relative to the horizon of the radar. Angle of attack will have an influence on the ball's launch angle.

Club path

The direction of the club head's sweet spot relative to the radar's target line. Path is influenced by a player's angle of attack, horizontal swing plane, and vertical swing plane.

Spin loft

The contribution to ball spin as a result of the affective loft on the club face presented to the ball during impact, which is approximately defined by the difference between the 3D angle of attack and 3D dynamic loft of the club at impact.

Horizontal swing plane

Direction of the club's sweet spot relative to the radar's target line, measured at the lowest point in the swing.

Vertical swing plane

Angle of the club's sweet spot relative to the ground, measured at the lowest point in the swing.