

How to create playing speed

In practice or match play, the player who plays the ball quicker would gain initiative by reducing the preparation and *get ready* time of the opponent, or making the opponent helpless by catching him unprepared. In this way, the player can generate more time for himself to prepare his *receive* and *return*. In a rally, the player with the quicker speed would gain the initiative and create more chances for attacking opportunities.

1: Analysis of speed in relation to ball striking

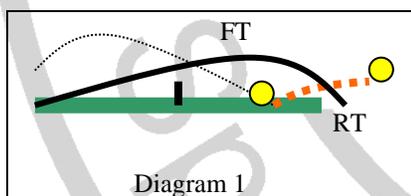
The law of physics makes it known that, $\text{Speed (velocity)} = \text{Distance} \% \text{ Time}$. This gives two ways by which we may measure the rate (speed) of velocity.

A: Given the same period of time, if the DT is longer, then the speed is faster; if the DT shorter, then the speed is slower.

B: Given the same DT, if the time required is shorter, then the speed is faster; if the time required is longer, then the speed is slower.

It would be relatively easy to apply these principles to measure the speed of a 100-meter runner but it would be impractical to measure the speed of two Table Tennis players when they are playing against each other. The reason for this is before to observe and analyse the player's speed when playing shots (slow or quick), we must take into account the following:

The total it takes to make a return (RT) is measured from the point the oncoming ball lands to the point at which the bat makes contact with the ball. See diagram 1.

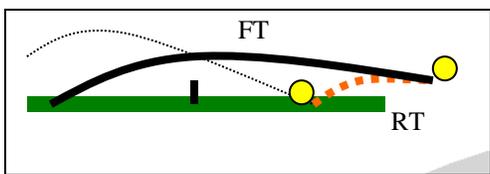


The RT varies in accordance with the opponent's **speed** when striking ball (to be slow or quick), the opponent's **force** in striking ball (to be great or small), the **spin** generated (to be weak or strong) and the **placement** of the ball (be it near or far from the receiver's body).

In general, when the oncoming ball has been played with great speed, great spin and, or with placement far from the receiver's body, then the time it takes to make a return would be longer, but it would be shorter otherwise. However, this condition is not absolute.

If a player could reduce the RT when making a return against an oncoming ball that has been played with great speed, great spin, strong force and with placement far from his body, then he would have a good chance of suppressing his opponent in terms of speed and gain the initiative. Therefore, taking the ball as early as possible is a crucial factor in reducing RT and cutting the opponent's preparation time to make his return.

Once the return has been made, the ball commences its *flight time (FT)*. The FT is measured from the time the ball leaves the bat and lands on the opponent's side (see diagram). The FT varies according to the player's use of force (great or small) and length of the DT (Distance travelled). In general, when a player plays the ball with great bat arm acceleration (plus transferring the weight and balance of the bat to the tip of the bat), then the FT would be shorter, but it would be longer otherwise. However, this



condition is not absolute. When making a return, if a player is able to take the ball as early as possible and make use of the oncoming ball's forward drive momentum, then the ball would be the subject of a greater force and as much rebounds with greater speed and acceleration whilst at the same time, the DT would shorten resulting in reducing the FT.

This method is crucial in generating greater speed for returns.

Theoretically speaking, the ideal method to generate greater total return would be to reduce the return time first, by taking the ball as early as possible, then reduce the FT where and however possible. However, practical experiences proves that because players have varying styles of play, and that when players making returns, they are not always positioned in the same place in relation to the table or are standing at the same distance away from the table.

Therefore, different rhythmic patterns (to be slow or fast) may emerge in playing the ball. For example, some players achieve short returns by taking the ball on the rise or at the top of its bounce, but do not necessary generate short FTs at the same time because they make returns by utilizing the force of the rebound only.

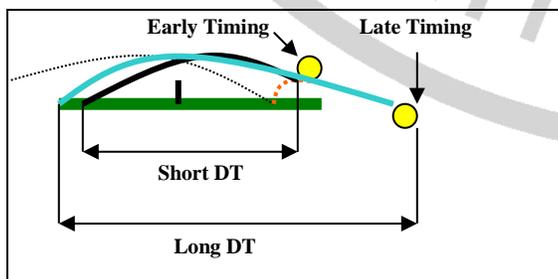
On the other hand, some players have longer RTs as they take the ball late but generate short FTs because they make returns by utilizing more of their *bodily forces*.

At present, the using of different rhythmic patterns to disrupt the opponent's playing (ball hitting) rhythm has already become one of the major strategic weapons in competitive match play. To sum up, if we want to measure the speed with which players play shots, we must take the combined time given by RT+FT as the only true reflection of speed.

General ways of creating speed:

According to the findings so far, we may create speed in the following ways:

Before striking a ball, get closer to the table if possible, so as to achieve *early timing*, and *suitably lower the MHT and reduce DT so as to increase ball speed* (see diagram).



When playing the ball, maximize the speed of the forearm and wrist, and make use of the force of the rebound to increase *ball speed*.

When playing a ball over the same DT, increasing the size of the force mostly depends on the speed of the bat at the point of contact with the ball. The greater the *bat speed* of the bat at the point of contact, the greater the size of force, the lesser the *bat speed*, the lesser the size of force.